81 -2399

No.

Office - Supreme Court, U.S.
FILED
JUL 1 1982
ALEXANDER L. STEVAS,
CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1981

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY and PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

Of Counsel:
JAMES B. LIBERMAN
DEBEVOISE & LIBERMAN
26 Broadway
New York, N.Y. 10004
(212) 248-6900

JAMES B. HAMLIN
Counsel of Record
GEORGE F. TROWBRIDGE
JOHN B. RHINELANDER
DEBORAH B. BAUSER
SHAW, PITTMAN, POTTS
& TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Attorneys for Petitioners

July 1, 1982

PRESS OF BYRON S. ADAMS PRINTING, INC., WASHINGTON, D.C.

QUESTION PRESENTED

Whether the National Environmental Policy Act, 42 U.S.C. § 4321 et seq., requires the Nuclear Regulatory Commission to consider and evaluate effects on the psychological health of area residents resulting from their fears concerning the operation of a nuclear power plant, even if the Commission determines that the actual risk of such operation will not be significant.*

---

* In addition to the parties listed in the caption of this petition, the Nuclear Regulatory Commission and the United States of America were respondents in the court below. Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company are subsidiaries of General Public Utilities Corporation. GPU Service Corporation, Saxton Nuclear Experimental Corporation and GPU Nuclear Corporation are also subsidiaries of General Public Utilities Corporation.

TABLE OF CONTENTS

	Page
QUESTION PRESENTED	i
TABLE OF CONTENTS	ii
TABLE OF AUTHORITIES	iii
OPINIONS BELOW	1
JURISDICTION	1
STATUTE INVOLVED	2
STATEMENT OF THE CASE	2
REASONS FOR GRANTING THE WRIT	10
I. The Decision Below Is In Conflict With Decisions Of Other Courts Of Appeals	10
II. The Decision Below Will Have A Significant Adverse Impact On The NRC And Other Federal Agencies	15
CONCLUSION	20
APPENDIX A: Opinions of the Court of Appeals and Amended Judgment issued May 14, 1982	1a
APPENDIX B: NRC Decision on Psychological Distress issued December 5, 1980	77a
APPENDIX C: NRC Decision on Psychological Distress issued September 17, 1981	101a
APPENDIX D: Amended Judgment of the Court of Appeals issued April 2, 1982	103a
APPENDIX E: Judgment of the Court of Appeals issued January 7, 1982	105a
APPENDIX F: Pertinent Sections of National Environmental Policy Act	109a
APPENDIX G: PANE's Contentions Relating to Psychological Distress	115a

TABLE OF AUTHORITIES

CASES: Page

Como-Falcon Coalition, Inc. v. United States Department of Labor, 465 F. Supp. 850 (D. Minn. 1978), *aff'd sub nom. Como-Falcon Community Coalition, Inc. v. United States Department of Labor*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980) 12, 13

First National Bank of Chicago v. Richardson, 484 F.2d 1369 (7th Cir. 1973) 11, 12

Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) 11, 13

Maryland-National Capital Park & Planning Comm'n v. United States Postal Service, 487 F.2d 1029 (D.C. Cir. 1973) 13

Monarch Chemical Works, Inc. v. Exon, 466 F. Supp. 639 (D. Neb. 1979) 14

Northern Indiana Public Service Co. v. Porter County Chapter of the Izaak Walton League, 423 U.S. 12 (1975) 21

Nucleus of Chicago Homeowners v. Lynn, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976) . 12

Stryker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980) 21

Trinity Episcopal School Corp. v. Romney, 387 F. Supp. 1044 (S.D.N.Y. 1974), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975) 14

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978) 9, 10, 19, 20

STATUTES:

National Environmental Policy Act, 42 U.S.C. § 4321 et seq. ..... *passim*

Atomic Energy Act, 42 U.S.C. § 2011 et seq. ... 3, 4, 5, 6

28 U.S.C. § 1254(1) 2

28 U.S.C. § 2342(4) 4

MISCELLANEOUS:

Report of the President's Commission on the Accident at Three Mile Island — The Need for Change: The Legacy of TMI (Oct. 1979) 18, 19

No.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1981

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY and PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company ("petitioners") hereby petition for a writ of certiorari to review the Amended Judgment of the United States Court of Appeals for the District of Columbia Circuit entered in this case.

OPINIONS BELOW

The opinions of the court of appeals are not yet published. They are reproduced in Appendix A, *infra*.

JURISDICTION

The Amended Judgment of the court of appeals was rendered without opinions on April 2, 1982, Judge Wilkey

dissenting;[1] it is reproduced in Appendix D, *infra*. A somewhat modified version of the Amended Judgment was issued by the court of appeals with its opinions on May 14, 1982. (App. A at 29a). The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

STATUTE INVOLVED

This case involves the National Environmental Policy Act, 42 U.S.C. § 4321 et seq. ("NEPA"). Sections 2, 101 and 102 of NEPA, 42 U.S.C. §§ 4321, 4331, 4332, are reproduced in Appendix F, *infra*.

STATEMENT OF THE CASE

Petitioners are the owners of a two-unit nuclear power plant near Middletown, Pennsylvania, known as Three Mile Island Nuclear Station, Units 1 and 2 ("TMI-1" and "TMI-2"). The Nuclear Regulatory Commission ("NRC") issued an operating license for TMI-1 in 1974. TMI-1 went into operation shortly thereafter and, subject to periodic shut-downs for refueling and maintenance, such operations continued for approximately five years. An operating license for TMI-2 was issued in 1978, and it went into operation that year.

At the time of the accident at TMI-2 on March 28, 1979, TMI-1 was shut down for refueling and scheduled maintenance. TMI-1 was not involved in the accident. Nevertheless, the NRC took the extraordinary step of issuing immediately effective orders—without prior notice or hearing—requiring that TMI-1 remain shut down until after an adjudicatory hearing to consider certain specified

---

[1] The April 2 Amended Judgment substantially altered and replaced an initial Judgment issued without opinions by the court of appeals on January 7, 1982. The January 7 Judgment is reproduced in Appendix E, *infra*.

safety issues, including particularly plant design and procedures, emergency planning, management capability and operator training.[2] In addition, the Commission stated that it had not determined whether issues such as psychological distress could be legally relevant to the TMI-1 proceeding. It therefore directed any party wishing to raise such issues to submit briefs on the question of whether NEPA or the Atomic Energy Act, 42 U.S.C. § 2011 *et seq.*, requires consideration of psychological distress.[3]

Respondent People Against Nuclear Energy ("PANE") sought to intervene in the restart hearing and proposed to litigate two contentions relating to psychological distress. PANE's Contention No. 1 alleged in essence that as a result of the TMI-2 accident, its members had suffered post-traumatic psychological distress manifested in feelings of anxiety, tension, fear and helplessness and in physical symptoms such as skin rashes, aggravated ulcers, and skeletal and muscular problems. PANE further alleged that renewed operation of TMI-1 would perpetuate and aggravate the distress. Contention No. 2 alleged that the accident has undermined citizen confidence in community institutions and has made it difficult to attract desirable businesses and residents to the TMI area. According to PANE, renewed operation of TMI-1 will exacerbate these tendencies and will cause

---

[2] On July 2, 1979, the NRC issued a brief order requiring that TMI-1 remain shut down until after a public hearing on the issue of restart and further order of the Commission. 44 Fed. Reg. 40,461 (1979). On August 9, 1979, the NRC issued a further order prescribing the format for the restart hearing and specifying the issues to be heard. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-79-8, 10 N.R.C. 141 (1979).

[3] *Metropolitan Edison Co., supra* n.2, 10 N.R.C. at 148.

severe harm to the stability, cohesiveness and well-being of communities in the vicinity of the reactor.[4] After considering extensive briefs discussing both NEPA and the Atomic Energy Act, the NRC split 2-2 on the question of whether PANE's contentions should be admitted into the TMI-1 restart proceeding.[5] The procedural effect of the decision was to exclude PANE's contentions and, because PANE had no other contentions, to exclude PANE itself from the restart proceeding. PANE thereupon sought review of the NRC's order in the court of appeals pursuant to the jurisdiction conferred by 28 U.S.C. § 2342(4) and 42 U.S.C. § 2239(b).

On appeal, PANE argued that its contentions were cognizable under NEPA and the Atomic Energy Act and that the NRC was required to admit and allow litigation of the contentions in the TMI-1 restart proceeding. Petitioners intervened in the court below and argued, along with the NRC, that the Commission's ruling should be affirmed because psychological distress and resultant community well-being are not cognizable under NEPA or the Atomic Energy Act. The case was argued on November 17, 1981, before a panel composed of Circuit Judges Wright and Wilkey and Senior Circuit Judge McGowan.

---

[4] PANE's contentions are reproduced verbatim in Appendix G, *infra*.

[5] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-39, 12 N.R.C. 607 (1980). A copy of this Order, with the separate views of each Commissioner, is reproduced in Appendix B, *infra*. One of the five seats on the Commission was vacant at the time of the 2-2 vote. After appointment of a fifth Commissioner, the NRC reconsidered the matter and a majority of the Commissioners voted to adhere to the result previously reached and to continue excluding PANE's contentions from the restart proceeding. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-81-20, 14 N.R.C. 593 (1981). A copy of this Order is reproduced in Appendix C, *infra*.

On January 7, 1982, the court of appeals issued a brief Judgment, without opinions, from which Judge Wilkey dissented. (App. E, *infra*). The Judgment directed the NRC to prepare an environmental assessment of the effects of restarting TMI-1 on the psychological health of neighboring residents and on the well-being of surrounding communities. The NRC was further ordered to determine on the basis of the environmental assessment whether a full environmental impact statement ("EIS") was required under NEPA. The Judgment also directed the NRC to prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.[6] Finally, the court of appeals enjoined the NRC from making a decision on the restart of TMI-1 until it had "complied with the requirements of" NEPA as described in that Judgment.

On April 2, 1982, the court of appeals issued an Amended Judgment superseding the January 7 Judgment, again with no opinions.[7] (App. D, *infra*). The Amended Judgment ordered the NRC to determine, using its own procedures, whether significant new circumstances or information concerning psychological health impacts of operating TMI-1 have arisen since the preparation of the original EIS at the time TMI-1 was licensed. If so, the NRC is required to prepare a supplemental environmental impact statement ("SEIS") considering both psychological health effects and the effects on the well-being of surrounding communities. In light of

---

[6] The NRC prepared such a statement and submitted it to the court of appeals on March 30, 1982.

[7] Judge Wright's majority opinion on NEPA explained that the January 7 Judgment "was replaced on April 2, 1982 and is no longer in effect." (App. A. at 8a n.4).

"current operating difficulties at TMI-1,"[8] the Amended Judgment vacated the injunction against making a restart decision, but required the NRC to give PANE and the court of appeals 30 days' notice if it intended to authorize restart "prior to complying with its obligations under NEPA." The Amended Judgment said nothing about the Atomic Energy Act.

On May 14, 1982, the court of appeals finally issued its opinions in the case, along with another Amended Judgment that differed somewhat from the April 2 Amended Judgment. (App. A).[9] Judge Wright, joined by Judge McGowan, held that under NEPA an agency is required to evaluate effects on human health and that "health encompasses psychological health." (App. A at 13a). Judge Wright concluded that although NEPA does not encompass "mere dissatisfactions" arising out of "social

---

[8] The court of appeals was referring to the corrosion found in some of the steam generator tubes at TMI-1—a problem unrelated to the issues in the restart proceeding itself. Petitioners' best estimate is that the steam generator problem will be resolved on a schedule that would allow restart of TMI-1 before the end of 1982. Petitioners believe that the court of appeals' decision on psychological distress is likely to be the "critical path" item that, unless reversed, will delay restart of TMI-1. In this connection, the NRC Staff has taken the position that in the absence of a special exemption, present NRC regulations will require further public hearings on the psychological distress issue, whether or not the Commission determines that an SEIS is required. *See* NRC Staff's Answer to Licensee's Motion With Respect to Psychological Health Issue, filed with the NRC on June 10, 1982. Such a hearing, if required by the Commission, would add additional time to the restart proceeding.

[9] Judge Wilkey, joined by Judge McGowan, wrote an opinion affirming the NRC's determination that psychological distress is not cognizable under the Atomic Energy Act. Judge Wright dissented from that holding. Petitioners are not seeking review of the court of appeals' holding under the Atomic Energy Act.

opinions, economic concerns, or political disagreements," it does apply to "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." (App. A at 16a-17a). The court further held that the NRC's "continued exercise of supervisory responsibility" over operation and maintenance of TMI-1 constitutes major federal action within the meaning of NEPA, thereby imposing upon the Commission a continuing duty to comply with NEPA's requirements. (App. A at 19a). [10] Under the court's view of this continuing duty, the NRC is obligated to determine whether "significant new circumstances or information" have arisen with respect to the potential psychological health effects of operating TMI-1 since the facility was licensed. (App. A at 30a). If the result of this threshold determination is affirmative, then the NRC must prepare an SEIS on psychological health effects. Finally, Judge Wright concluded that PANE's Contention No. 2—dealing with community cohesiveness, stability and well-being—concerns so-called "secondary" socio-economic impacts that need not be considered under NEPA unless an SEIS is otherwise required. The court held that if an SEIS is required to evaluate psychological health effects, the document must also include an analysis of the secondary impacts alleged in PANE's Contention No. 2. (App. A at 17a-18a).

Judge Wilkey dissented at length from the court's holding under NEPA. He pointed out that the majority's

---

[10] Petitioners believe that the court's holding with respect to the NRC's continuing duties under NEPA is erroneous. As Judge Wilkey pointed out, the majority's conclusion is tantamount to holding that the NRC is engaged in a proposed major federal action "every second of every day," which may "significantly increase the NEPA burden on all regulatory agencies in the future." (App. A. at 49a, 50a).

decision "requires consideration of an 'impact' on health—psychological stress—which has never before been held cognizable under NEPA." (App. A at 31a). To the contrary, in Judge Wilkey's view, the court of appeals' decision is squarely inconsistent with the other federal court cases that have considered the issue. (App. A at 39a-45a).

In addition, Judge Wilkey found the majority's reading of NEPA unwise, unwarranted and likely to have a serious adverse impact on the nuclear industry and on all federal agencies subject to NEPA's requirements. PANE's argument, he noted, is not that operation of TMI-1 will affect human health because of dangers inherent in operation of a nuclear power plant, but rather "that individuals' *fears* of an accident at the plant, combined with their lack of confidence in the NRC, will lead to an extension of the psychological stress allegedly caused by the TMI-2 accident." (App. A at 37a) (emphasis in original). Thus instead of assessing the risk of a proposed activity, the agency "is now required to assess *how people perceive and react to the risk*." *Id.* (emphasis in original). In the case of TMI-1, this means that the NRC must "determine whether people so fear renewed operation" that such operation should not go forward, regardless whether the NRC's assessment of "the actual risk indicated that the impact on health will not be significant." *Id.* Judge Wilkey believed that this "takes NEPA far beyond its intended purpose," and substitutes the views of area residents—"no matter how scientifically ignorant and divorced from reality those views (fears) may be"—for the judgment that Congress has already made in the case of nuclear power. (App. A. at 38a). With respect to the congressional judgment on nuclear power, Judge Wilkey quoted this Court's holding that "[n]uclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try

nuclear energy . . . ." *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 557-58 (1978). Thus in Judge Wilkey's view, the effect of the majority's holding "would be to let any special interest group effectively repeal an act of Congress if it could whip up sufficient hysteria." (App. A at 38a).

Judge Wilkey was also concerned about the practical difficulties of complying with the majority's decision. He pointed out that the issue is not how much psychological damage was caused by the TMI-2 accident, but "how much *additional* damage will result from TMI-1's restart." (App. A at 40a) (emphasis in original). This he thought to be "particularly ephemeral and speculative since it is not subject to *measurement* at all." (App. A at 40a-41a) (emphasis in original). Therefore, the NRC will be forced to "*predict* how every individual in the TMI area will react to the restart." (App. A at 41a) (emphasis in original). In summary, Judge Wilkey concluded that Congress did not intend NEPA "to encompass an effect which not only varies from individual to individual, but which is also entirely subjective." *Id.*

Finally, Judge Wilkey demonstrated that the logic of the court's decision cannot be limited to TMI or even to the NRC and nuclear power. He listed four other NRC licensing proceedings in which psychological distress has been raised as an issue by intervenors since the court issued its initial Judgment on January 7, 1982. (App. A at 57a-59a). [11] These proceedings made it clear to Judge Wil-

[11] In addition to the four proceedings listed by Judge Wilkey, psychological distress has recently been raised in the Perry, Limerick and Midland operating license proceedings. *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), NRC Docket Nos. 50-440, 50-441; *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), NRC Docket Nos. 50-352, 50-353; *Consumers Power Co.* (Midland Plant, Units 1 and 2), NRC Docket Nos. 50-329, 50-330.

key that the majority's decision "will not be deemed limited or sui generis, but rather as inviting protests based on psychological stress to be raised in all nuclear proceedings." (App. A at 59a). Judge Wilkey also found no logical reason why the majority's rationale could not be applied to coal mines, urban housing and other projects subject to NEPA. Indeed, he stated that the "majority rationale must apply to the psychological effects of *all* actions of *all* agencies, which is broad coverage indeed." (App. A at 38a n.17) (emphasis in original).

REASONS FOR GRANTING THE WRIT

A writ of certiorari should be granted in this case because the court of appeals' decision is in conflict with decisions of other courts of appeals and because it constitutes an unprecedented and unwarranted extension of NEPA that is likely to have a substantial adverse impact upon NRC licensing activities and upon the federal government in general. In addition, the decision below is inconsistent with the teachings of this Court in *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978). Unless the decision is promptly reversed, the NRC will be required under NEPA to consider psychological distress in connection with TMI-1 and will also be faced with psychological distress contentions in its licensing activities at other nuclear plants. The decision may also be applied to any other federal agency that undertakes or regulates activities capable of engendering fear, anxiety or psychological distress among members of the public. The lower court's novel reading of this important federal statute merits Supreme Court review.

I. The Decision Below Is In Conflict With Decisions Of Other Courts Of Appeals

In extending NEPA to the realm of public fears, anxiety and psychological distress, the court of appeals has

taken an unprecedented step that is at odds with prior decisions of the Courts of Appeals for the Second, Seventh and Eighth Circuits.

In *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973), the Second Circuit noted that psychological reactions to a proposed jail should not be considered under NEPA:

> For the most part [plaintiffs'] opposition is based upon a psychological distaste for having a jail located so close to residential apartments, which is understandable enough. *It is doubtful whether psychological and sociological effects upon neighbors constitute the type of factors that may be considered in making such a determination since they do not lend themselves to measurement.* [10]

471 F.2d at 833 (emphasis added). The court's footnote 10 explained further:

> [10]Unlike factors such as noise, which can be related to decibels and units which measure duration, or crime, in which crime statistics are available, *psychological factors are not readily translatable into concrete measuring rods.*

Id. n.10 (emphasis added). The same rationale applies here. As in *Hanly*, the psychological effects alleged by PANE cannot be meaningfully quantified and weighed in a NEPA cost/benefit analysis.

The Seventh Circuit has reached the same conclusion. In *First National Bank of Chicago v. Richardson*, 484 F.2d 1369 (7th Cir. 1973), a proposed jail was again attacked under NEPA, and the court held that public fears and sensibilities are not cognizable under NEPA. The court acknowledged that plaintiffs' concerns were "none the less real because psychological," 484 F.2d at 1375, but it concluded that:

> As regards public "sensibilities" aroused by criminal defendants, we question whether such factors, even if amenable to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized.

Id. at 1380 n.13. The point of this case is clear. While the underlying bases of community fears—such as increased crime—may be cognizable under NEPA, the fear in and of itself is not. [12]

In *Nucleus of Chicago Homeowners v. Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976), the Seventh Circuit followed the *First National Bank* case and held that fear of low-income housing is not cognizable under NEPA:

> To the extent that this claim can be construed to mean that HUD must consider the fears of the neighbors of prospective public housing tenants, we seriously question whether such an impact is cognizable under NEPA.

524 F.2d at 231.

The lower court's decision is also inconsistent with a more recent decision of the Eighth Circuit. In *Como-Falcon Coalition, Inc. v. United States Department of Labor*, 465 F. Supp. 850 (D. Minn. 1978), plaintiff sought to enjoin the establishment of a Job Corps center in St.

---

[12] The actual safety of TMI-1 was exhaustively considered in the restart hearing that went forward before an Atomic Safety and Licensing Board of the NRC. The evidentiary hearing consumed more than six months, with more than 150 witnesses and a transcript exceeding 26,000 pages. Virtually every plausible safety concern associated with the TMI-2 accident was thoroughly aired. The Licensing Board has so far issued two partial recommended decisions favorable to restart encompassing some 1,145 pages.

Paul, Minnesota. In rejecting plaintiff's assertion that an EIS was required, the district court stated:

> The impact a Job Corps center might have on the security of an urban environment is an emotionally charged issue. Members of plaintiff understandably fear an influx of disadvantaged youth in their neighborhood when reports from other Job Corps centers portend increased criminal activity . . . . The incidence of crime as an environmental impact cannot be determined by a comparison of emotional fervor. *Because plaintiff's fears, while understandable, are not based on a significant likelihood of danger to the community, the Court concludes that the Department of Labor acted reasonably in determining that the proposed Job Corps center would not appreciably affect public safety in the neighborhood.*

465 F. Supp. at 861-62 (emphasis added). On appeal, the Eighth Circuit affirmed, noting particularly that "[t]he social and economic factors raised by the Coalition's complaint are not encompassed within the provisions of NEPA . . . ." *Como-Falcon Community Coalition, Inc. v. United States Department of Labor*, 609 F.2d 342, 345 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980).

In summary, the lower court's decision is a clear departure from the judicial consensus that community fears and psychological distress are not within the scope of NEPA.[13] Judge Wright attempted to distinguish the cases cited above on the grounds that they involved "socioeconomic anxieties" resulting from "people pollution," and not "medically recognized impairment of . . .

---

[13] The court of appeals' decision here is also inconsistent with its own earlier decision in *Maryland-National Capital Park & Planning Comm'n v. United States Postal Service*, 487 F.2d 1029 (D.C. Cir. 1973). There, the court held that some questions of esthetics do not lend themselves to NEPA analysis because "[l]ike psychological factors they 'are not readily translatable into concrete measuring rods.' " 487 F.2d at 1038, *quoting Hanly v. Kleindienst*, *supra*, 471

psychological health" resulting from a "traumatic nuclear accident," raising fears of "the holocaust potential of an errant nuclear reactor." (App. A at 15a, 16a).

Judge Wilkey criticized the majority's departure from prior case law at some length. (App. A at 39a-45a). In particular, he discussed Judge Wright's distinction between mere "socioeconomic anxieties" and "medically recognized impairment of psychological health" in a passage that bears repeating here:

> This purported distinction is destroyed by the majority's own finding that it is a "simple fact that effects on psychological health are effects on the health of human beings." The assertion that mere "anxieties" about nearby matters other than nuclear power are not effects on psychological health is entirely unsupported and, I submit, obviously unsupportable. It is a callous assumption indeed to believe that persons living close to a prison or in a high-crime area cannot suffer very real psychological harm from fear of physical violence—and highly illogical, also, since the casualty total from crime is a gruesome, proven fact, while the casualty total from nuclear accidents so far, fortunately, remains at zero.
>
> The majority's decision to ignore these many cases seems based ultimately on nothing more than a *political determination* that fears that federal actions will "change the character of the neighborhood, reduce property values, and increase the dangers of crime" are simply not worthy of consideration. Fears of nuclear power, on the other hand, must be considered, presumably because the majority considers them legitimate. *In each case, however, what we are*

F.2d at 833 n.10. The court of appeals' decision is also inconsistent with district court decisions in *Monarch Chemical Works, Inc. v. Exon*, 466 F. Supp. 639, 657 (D. Neb. 1979), and *Trinity Episcopal School Corp. v. Romney*, 387 F. Supp. 1044, 1078-79 (S.D.N.Y. 1974), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

> *dealing with are fears and anxieties; if NEPA embraces fears and anxieties in one, it must in all.*

(App. A at 41a-42a) (emphasis in original).

There is no basis in law or logic for distinguishing the present decision from the prior cases holding that psychological distress is not cognizable under NEPA. Petitioners believe that Judge Wilkey was clearly correct in concluding that the majority's decision is "unwarranted, unprecedented, and inconsistent with relevant decisions in this and other circuits." (App. A at 34a).

II. The Decision Below Will Have A Significant Adverse Impact On The NRC And Other Federal Agencies

The fundamental holding of the court below is broad indeed—that NEPA requires consideration of effects on human health and that "in the context of NEPA, health encompasses psychological health." (App. A at 13a). Although there are passing references in the majority's opinion to the fact that the TMI-2 accident was "unique," the majority expressly disclaims any intent "to draw a bright line" delineating the future effect of its decision in other contexts. (App. A at 16a, 17a). In fact, Judge Wilkey was able to find nothing in the majority opinion that furnishes a principled basis upon which the effect of the decision could logically be limited to TMI. As he stated in his dissent, "NEPA consideration therefore should be mandatory in *all* licensing decisions, if psychological stress is cognizable at all." (App. A at 48a) (emphasis in original). Moreover, even if one were prepared to accept the majority's logic of distinguishing "socioeconomic anxieties" from "medically recognized impairment of psychological health," this threshold test would prove difficult or impossible to apply in practice. The NRC would be required to consider and resolve endless disputes about

whether predicted psychological distress in particular locations would be merely a "socioeconomic anxiety" rather than a real "impairment" of psychological health that is "medically recognized." The disruptive effect on the business of the NRC would be substantial. [14]

If the court of appeals' decision stands, the NRC could be faced with psychological distress contentions in licensing actions at all plants around the country, regardless whether the plants are safe and regardless whether there is any basis in fact for the alleged fears and stress. Surrounding any nuclear plant there is a segment of the population that fears and distrusts nuclear power; there will inevitably be challenges by resourceful anti-nuclear groups all over the country alleging anxiety and distress that is "severe" and "medically recognizable," as PANE alleges here. Indeed, the process has already begun. As noted above, such challenges have already been made by intervenors in seven different NRC licensing proceedings. *See* n.11, *supra*, and App. A at 57a-59a. The progeny already spawned by the lower court's decision clearly substantiate Judge Wilkey's warning that the decision would amount to "a court-imposed paralysis of nuclear power at Three Mile Island, and potentially elsewhere as well." (App. A at 31a). [15]

---

[14] In the present case, for example, the NRC has been attempting to evaluate psychological distress since the initial Judgment was issued on January 7, 1982. As of May 13, 1982, the NRC had spent more than $400,000 on the effort and still was not in a position to make the threshold determination concerning the "significance" of the alleged psychological distress. *See* Request of Respondent NRC for Expeditious Issuance of the Court's Opinions, filed with the court of appeals on May 13, 1982.

[15] This petition addresses primarily the broad impact of the decision below on the NRC and other agencies generally in the performance of their regulatory functions. However, the effect of the decision is most acute at TMI, where it threatens, in Judge Wilkey's words, a

Moreover, the court's decision is not likely to be limited to the NRC and nuclear power. Emotions often run high when the federal government proposes to build a jail, or a dam, or a highway, or an experimental reactor, or a new nuclear weapons system. As Judge Wilkey pointed out so forcefully, the scope of NEPA's mandate logically cannot vary according to the kind of federal action proposed. Nor can NEPA's requirements depend on whether the court of appeals believes "the *source* of the psychological harm is acceptable." (App. A at 44a) (emphasis in original). Thus, the government could be required to predict and quantify the psychological effects of an area- or nationwide missile system or an expressway through a residential area. Many such projects would doubtless become mired for years in disputes and litigation over the adequacy of the agency's assessment of psychological consequences, which by their nature are highly subjective and essentially unprovable.

The decision below sets a particularly unfortunate precedent because of the difficulties and uncertainties inherent in any attempt to predict psychological distress meaningfully in an environmental assessment or an EIS. The agency necessarily would be dealing with the reactions of individuals subject to myriad daily psychological influences, such as problems at home or work. Question-

---

"paralysis of nuclear power." The consequences of such a paralysis are enormous. Petitioners advised the court of appeals that replacement power costs have been running at approximately $14 million per month while TMI-1 is forced to remain shut down. In addition, orders of the Pennsylvania Public Utility Commission make a portion of the funds needed for TMI-2 clean-up contingent upon restart of TMI-1. No one disputes that the public interest requires prompt clean-up and decontamination of TMI-2. *See* Public Utilities' Memorandum In Opposition To PANE's Motion To Permit Supplemental Briefing, filed in the court below on April 15, 1982. The impact of the court's decision on TMI alone is sufficient to warrant Supreme Court review.

naires and surveys asking people about the proposed project could be suggestive and would be difficult to interpret. Even if the government hired teams of psychiatrists and clinical psychologists to analyze each individual in the area of a proposed project, it could not with complete assurance attribute an individual's psychological or emotional reactions to a particular causal event. While some objective indicators might be measured to give the agency some idea of the existing general stress level in an area, these indicators would not necessarily show what additional stress would be *caused* by the proposed project. As Judge Wilkey stated, the requirements imposed by the court below are "certain to produce long delays and [are] perhaps *ultimately impossible to fulfill.*" (App. A at 68a) (emphasis added).

There are other disturbing ramifications of the court of appeals' decision. Psychological distress, if it occurs at all, is the product of people's *perceptions*, not the actual safety of a proposed project. And perceptions are often inconsistent with reality. Groups opposed to a project can easily alter perceptions and engender fears and anxiety by disseminating inflammatory material about the project, thereby creating an issue to use against the project in NEPA litigation. Exaggerated media reports also tend to spread and exacerbate public anxiety and apprehension. Sometimes stress is caused almost exclusively by misinformation. In the case of TMI-2, for example, it is likely that public concern arose primarily from the Governor's evacuation advisory and from reports of a possible hydrogen bubble explosion. Yet it is now agreed that the evacuation advisory was based on a gross misunderstanding by the NRC of reported radiation levels, and that the hydrogen explosion could not have occurred. *See* App. A at 46a & n.39; Report of the President's Commission on the Accident at Three Mile

Island — The Need for Change: The Legacy of TMI, at 118, 126-30 (Oct. 1979). If the NEPA decision-making process is to turn on anxieties and fears caused by misperceptions and erroneous information, then NEPA will have become totally divorced from reality and its scope will be limited only by the imagination.

The clear implication of the lower court's holding is that the NRC could not license a plant otherwise found safe if some local residents have conceived a fear and distrust of nuclear power that is sufficiently severe and intense. As Judge Wilkey pointed out, this would subordinate the scientific judgment of the NRC to the "*views of the population itself on the very desirability of the activity* . . . ." (App. A. at 37a-38a) (emphasis in original). In this sense, the court of appeals' decision is inconsistent with the teachings of *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978), where this Court stated:

> Nuclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try nuclear energy, establishing a reasonable review process in which courts are to play only a limited role. The fundamental policy questions appropriately resolved in Congress and in the state legislatures are *not* subject to reexamination in the federal courts under the guise of judicial review of agency action. Time may prove wrong the decision to develop nuclear energy, but it is Congress or the States within their appropriate agencies which must eventually make that judgment. In the meantime courts should perform their appointed function.

435 U.S. at 557-58 (emphasis in original). NEPA should not be transformed into a device through which residents' fear of nuclear power is used to nullify the congressional determination "to at least try nuclear energy."

Petitioners submit that NEPA was never intended to require federal agencies to predict and evaluate fears and emotions, however deeply felt, or to prepare psychological impact statements on major federal actions. The holding by the District of Columbia Circuit to the contrary is, as Judge Wilkey stated, a "novel hurdle, well designed to delay the development of nuclear power (contrary to the national policy determined by Congress and the Executive), [and] is thoroughly consistent with this court's track record of using NEPA to delay the development of important energy sources." (App. A at 34a). *See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 557-58 (1978). To prevent federal agencies from proceeding with necessary projects until they have ascertained, analyzed and quantified the possible psychological and emotional reaction to the project lies far beyond NEPA's boundaries. When agency decisions must be based on public perceptions rather than reality, we have surely reached a point that, in the words of this Court, "borders on the Kafkaesque." *Id.* at 557. The court of appeals' decision cannot be allowed to stand.

CONCLUSION

Petitioners cannot compose a better conclusion for this petition than the paragraph Judge Wilkey chose to conclude his dissent:

> We have thus come a long way in fifty years, from a time when the President of the United States was widely and enthusiastically applauded for declaring: "The only thing we have to fear is fear itself." Now the fear itself necessitates an environmental assessment. All risky activity must grind to a halt in the interim. Inaction has become epidemic, and delay is maximized. I do not believe the Congress intended

> NEPA to constrain federal action on these psychological and emotional bases. Accordingly, I respectfully dissent.

(App. A at 69a).

Petitioners believe that the court of appeals' decision is so clearly wrong and Judge Wilkey's dissent is so clearly correct that summary reversal is warranted. *See Stryker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223 (1980); *Northern Indiana Public Service Co. v. Porter County Chapter of the Izaak Walton League*, 423 U.S. 12 (1975). If the Court believes that summary reversal is inappropriate, then the case should be set for briefing and argument on the merits.

Respectfully submitted,

JAMES B. HAMLIN
Counsel of Record
GEORGE F. TROWBRIDGE
JOHN B. RHINELANDER
DEBORAH B. BAUSER
SHAW, PITTMAN, POTTS
& TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Attorneys for Petitioners

Of Counsel:
JAMES B. LIBERMAN
DEBEVOISE & LIBERMAN
26 Broadway
New York, N.Y. 10004
(212) 248-6900

July 1, 1982

IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY, PETITIONER

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA, RESPONDENTS

METROPOLITAN EDISON COMPANY *et al.* (PUBLIC UTILITIES), INTERVENORS

Petition for Review of an Order of the Nuclear Regulatory Commission

---

Argued November 17, 1981

Amended Judgment filed April 2, 1982

Opinions filed May 14, 1982

William S. Jordan, III for petitioner.

Peter G. Crane, Attorney, Nuclear Regulatory Commission, with whom *Stephen F. Eilperin*, Solicitor, Nuclear Regulatory Commission, and *Peter R. Steenland*,

Jr. and *Jacques B. Gelin*, Attorneys, Department of Justice, were on the brief, for respondents.

James B. Hamlin, with whom *George F. Trowbridge* and *Mark Augenblick* were on the brief, for intervenors.

Before WRIGHT, *Circuit Judge*, MCGOWAN, *Senior Circuit Judge*, and WILKEY, *Circuit Judge*.

Opinion for the court on the National Environmental Policy Act issue, concurred in by *Senior Circuit Judge* MCGOWAN, filed by *Circuit Judge* WRIGHT. *Circuit Judge* WILKEY dissents in Parts I and III of his opinion.

Senior Circuit Judge MCGOWAN concurs in Part II of *Circuit Judge* WILKEY's opinion, thereby making that Part the opinion of the court on the Atomic Energy Act issue. *Circuit Judge* WRIGHT dissents on the Atomic Energy Act issue and files an opinion.

WRIGHT, *Circuit Judge*: On March 28, 1979 Three Mile Island Unit 2, a nuclear reactor operated by Metropolitan Edison Company, was seriously damaged in the worst nuclear accident Americans have yet experienced. The incident precipitated widespread alarm and led to the evacuation of many neighboring residents from their homes. At the time of the event, Three Mile Island Unit 1 (TMI-1), another Metropolitan Edison nuclear reactor of similar design which shared some common facilities with Unit 2 (TMI-2), was not in operation. The Nuclear Regulatory Commission (Commission) ordered that it remain in a cold shutdown condition pending further investigation of whether it could be operated safely. Since then the Commission has held extensive hearings on technical, managerial, and operational issues related to the proposed restart of TMI-1. The Commission has refused, however, to consider whether renewed operation of TMI-1 might cause severe psychological harm to neighboring residents and serious economic and social deterioration in nearby communities.

People Against Nuclear Energy (PANE), one of the intervenors in the restart proceeding, is composed primarily of neighbors of TMI. It seeks judicial review of the Commission's decision to limit the scope of its inquiry in this manner. PANE contends that, under the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.* (1976), and the Atomic Energy Act, 42 U.S.C. § 2133 (1976), the Commission must take into account potential harms to psychological health and community well-being. We hold that these environmental impacts are cognizable under NEPA. Therefore, the Commission must make a threshold determination, based on adequate study, whether the potential psychological health effects of renewed operation of TMI-1 are sufficiently significant that NEPA requires preparation of a supplemental environmental impact statement.[1]

I. Statement of the Case

In 1974 Metropolitan Edison Company received an operating license for Unit 1, a nuclear power plant facility at Three Mile Island, Pennsylvania. Four years later the company received an operating license for Unit 2, a nuclear facility of similar design at the same site. On March 28, 1979 Unit 2 suffered a serious nuclear accident which damaged the reactor, caused acute and widespread anxiety, and led the Governor of Pennsylvania to recommend temporary evacuation of pregnant women and preschool children from a five-mile radius surrounding the plant.

At that time Unit 1 had been taken out of operation for refueling. The Nuclear Regulatory Commission ordered Metropolitan Edison to keep Unit 1 in a cold shut-

---

[1] Today this court also holds that the Atomic Energy Act does not require the Commission to consider potential harms to psychological health. *See* Part II of Judge Wilkey's opinion. Judge Wright dissents from the Atomic Energy Act holding. *See* Judge Wright's dissenting opinion, *infra*.

down condition pending further order by the Commission. It also announced that a hearing would be conducted to determine whether TMI-1 operations could safely be resumed. Order of July 2, 1979, 44 Fed. Reg. 40461 (1979), Joint Appendix (JA) 21. On August 9, the Commission published an order and notice of hearing regarding the restart of TMI-1. 10 NRC 141-151 (1979), JA 22. Specifying a number of issues for consideration at the hearing, the Commission's order also stated, "While real and substantial concern attaches to issues such as psychological distress and others arising from the continuing impact of aspects of the Three Mile Island accident unrelated directly to exposure to radiation on the part of citizens living near the plant, the Commission has not determined whether such issues can be legally relevant to this proceeding." The Commission invited parties wishing to raise such subjects in the restart proceeding to submit briefs to the Commission's Atomic Safety and Licensing Board (Licensing Board) for consideration. 10 NRC at 148, JA 29.

Petitioner PANE, an intervenor in the restart proceeding, filed two draft contentions which are at issue in this case: it asserted, first, that restart of TMI-1 would cause severe psychological distress to persons living in the vicinity of the reactor, and second, that renewed operations would seriously damage the stability, cohesiveness, and well-being of the neighboring communities because it would perpetuate loss of citizen confidence in community institutions and would discourage economic growth. JA 84-86. In support of its draft contentions, PANE submitted a supporting brief, JA 91-117, and a preliminary plan for presentation of evidence on psychological distress, JA 88-90.

After considering briefs from PANE, other intervenors, the Commonwealth of Pennsylvania, the licensee, and the Commission's staff, the Licensing Board issued a certification to the Commission on psychological dis-

tress issues. 11 NRC 297 (1980), JA 63. Discussing legal issues arising from the Atomic Energy Act and NEPA, the Board concluded that "the Commission, within its discretion, may and should consider psychological distress and community fears under NEPA for the purpose of mitigating the effects of its TMI-1 licensing activity." *Id.* The Licensing Board accepted the contentions of the staff and the licensee that the Commission's responsibility under the Atomic Energy Act to protect the "public health and safety" did not extend to psychological health. It described the issue as a question of first impression. "[P]sychological stress," it concluded, "is probably not cognizable under the Atomic Energy Act but * * * the Commission might conclude to the contrary for reasons not discussed by the parties." 11 NRC at 299, JA 65. On the other hand, the Board agreed with PANE that psychological distress was cognizable under NEPA. It asserted that psychological factors were sufficiently quantifiable to be considered, 11 NRC at 301-303, JA 67-69. Considering psychological factors in the restart proceeding would assist the Commission in mitigating community fears, the Board explained. 11 NRC at 305-309, JA 71-75. It took no position on whether the Commission should prepare an environmental impact statement. 11 NRC at 304-305, JA 70-71.

When the Commission initially voted, in December 1980, on the question of whether to include psychological distress issues in the restart proceeding, one of the five seats on the Commission was vacant. The four Commissioners were evenly divided. Each Commissioner wrote a separate opinion expressing different reasons for his vote. Then-Chairman Ahearne and Commissioner Hendrie voted to exclude psychological stress issues. Then-Chairman Ahearne believed that the Commission was permitted, but not required, to consider psychological stress and community fears, but maintained that the best way to minimize these fears was to ensure that the

plant was safe before approving restart. 12 NRC 609-611 (1980), JA 3-5. Commissioner Hendrie took the position that neither the Atomic Energy Act nor NEPA required the Commission to consider public fears, and he added, "Congress had already decided that the country is to have a nuclear power program even if it makes some people uneasy." 12 NRC at 612-618, JA 6-12.

Commissioners Gilinsky and Bradford voted to allow psychological stress contentions to be considered in the Licensing Board proceeding. Commissioner Gilinsky was influenced by the Licensing Board's recommendation and, more importantly, by the contention of the Commonwealth of Pennsylvania that the Commission should investigate and consider the psychological effects of restarting TMI-1. 12 NRC at 619-620, JA 13-14. Also accepting the Licensing Board's analysis, Commissioner Bradford noted that no other agency had authority to assess and act on stress-related issues in connection with restart of TMI-1. 12 NRC at 624, JA 18. He asserted that full consideration of the extent of stress was the most effective way to deal with stress-related harms. 12 NRC at 621-626, JA 15-20.

The 2-to-2 vote constituted an effective rejection of the Licensing Board's recommendation. Therefore the evidentiary hearing proceeded without consideration of PANE's psychological distress and community deterioration contentions.[2] In addition, the Commission staff ex-

[2] The Licensing Board, after extensive hearings, issued a first partial initial decision on August 27, 1981, dealing with management issues, and a second partial initial decision on December 14, 1981, discussing plant design and procedures, separation issues, and emergency planning issues. The Board concluded that TMI-1 could be operated in the short term without endangering the health and safety of the public and that the licensee had made reasonable progress with respect to various long-term actions which provided reasonable assurance of safe operation in the long term. The Commission has not yet determined whether the Board's decision on the ac-

cluded these issues from its environmental impact appraisal, submitted to the Commission in March 1981 and supplemented in May 1981, which recommended that no environmental impact statement be prepared in connection with the proposed restart of TMI-1.[3] On September 17, 1981, after the appointment of a fifth Commissioner, Chairman Nunzio Palladino, the Commission adhered by a vote of 3-to-2 to its previous result. Chairman Palladino did not write an opinion or concur in any of the previous opinions.

---

ceptability of restart at low power should be made effective. A judgment of this court, issued January 7, 1982, ordered the Commission not to "make a decision to restart TMI-1" until it had complied with the requirements of NEPA as set forth in the previous paragraph of the order. On April 2, 1982 this court amended its judgment, vacating the injunction but ordering the Commission to give 30 days' notice to the court and to petitioner if it "intends to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA."

[3] Early in the proceeding several intervenors filed contentions that an environmental impact statement (EIS) should be prepared before the Commission decided whether to restart TMI-1. The Commission staff took the position that no EIS was required. Pursuant to Commission regulations, it undertook to prepare an environmental impact appraisal (EIA) setting forth the basis for its position that NEPA did not require an EIS on the restart decision. On March 27, 1981 the staff issued an EIA. In response to criticisms expressed by the Commonwealth of Pennsylvania regarding the adequacy of the EIA, the staff supplemented the appraisal on May 11, 1981. Neither document addressed the contentions raised by PANE—psychological health effects and community deterioration in the area surrounding Three Mile Island. On December 15, 1981 the Licensing Board issued a memorandum and order stating its conclusion that there was no need for any additional evidentiary hearings on any of the contentions relating to the adequacy of the EIA or the need for an EIS, and that there was no basis for ruling that the EIA was inadequate or that an EIS should be prepared. Memorandum and Order on NEPA—Compliance Issues, December 15, 1981.

PANE filed a petition for review of the Commission's order, issued December 5, 1980, which excluded its psychological stress and community deterioration contentions from the TMI-1 restart proceeding. It sought reversal on the basis of the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.* (1976), and the Atomic Energy Act, 42 U.S.C. § 2133 (1976).

On January 7, 1982 this court issued an interim judgment, pending issuance of opinions, which ordered the Commission to prepare an environmental assessment of the effects of the proposed TMI-1 restart on the psychological health of neighboring residents and on the well-being of the surrounding communities. The judgment ordered the Commission to determine on the basis of this study whether to prepare a supplemental environmental impact statement. Until the Commission had complied with the requirements of NEPA, it was ordered not to make any decision to restart TMI-1. On the Atomic Energy Act question this court ordered the Commission to submit to the court a statement of its reasons for concluding that the statute did not require consideration of psychological health in the restart proceeding. Judge Wilkey dissented from the judgment. The Commission's statement of reasons was filed with this court on March 30, 1982.

After further consideration of the NEPA issues, the court replaced the January 7, 1982 judgment with an amended judgment, entered on April 2, 1982.[4] The amended judgment gave the Commission discretion to choose its procedures for studying the significance of the alleged psychological health impacts arising from the proposed restart of TMI-1. It made clear that the initial study should focus on psychological health effects. The

---

[4] Much of Judge Wilkey's dissent is directed to the January 7, 1982 judgment, which was replaced on April 2, 1982 and is no longer in effect. The opinion of the court discusses only the requirements set forth in the amended judgment.

Commission would be required to consider the secondary impacts on community well-being only if a full supplemental EIS was prepared. Finally, noting that the operators of TMI-1 had announced that extensive corrosion problems were likely to delay the restart by six to twelve months,[5] the amended judgment lifted the injunction against restart as unnecessary to preserve the status quo. The court instructed the Commission, however, to give notice to the court and to petitioner if subsequently it intended to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA.

II. National Environmental Policy Act

The National Environmental Policy Act is designed to assure that governmental agencies take a "hard look" at the environmental consequences of major proposed actions, and that they adjust ongoing programs in light of new information or changed circumstances. PANE urges us to hold that NEPA requires the Commission to prepare a new or supplemental environmental impact statement (EIS) on the psychological health effects and community deterioration that might result from restart of TMI-1. We agree with PANE that these environmental effects fall within the scope of NEPA, and that the Commission has a continuing responsibility to comply with NEPA's procedural requirements in its supervision of licensed nuclear facilities, including TMI-1. At the same time, we recognize the agency's role in making a threshold determination of whether changed circumstances and new information regarding environmental effects require a supplemental EIS. We therefore remand the record to the Commission for a decision on the EIS question.

---

[5] New York Times, Feb. 11, 1982, A18, at col. 1.

A. *Cognizability of Psychological Health and Community Deterioration*

PANE contends that NEPA requires the Commission to prepare a new or revised EIS to evaluate two distinct environmental effects of reopening TMI-1. First, PANE alleges that renewed operation of the nuclear reactor would cause "severe psychological distress" to persons living in the vicinity of the reactor, including PANE's members. According to PANE, the accident at TMI-2 created intense anxiety, tension, and fear, accompanied by physical disorders including skin rashes, aggravated ulcers, and skeletal and muscular problems. JA 84-86. Post-traumatic neurosis, PANE asserts, can be diagnosed with reasonable medical certainty on the basis of standardized quantitative tests. Petitioner's brief at 46-47. Moreover, PANE argues, reopening TMI-1 would severely aggravate existing problems and would prevent Three Mile Island's neighbors from resolving and recovering from the trauma they have suffered. JA 84-86.

Second, PANE contends that resumption of operations at TMI-1 would cause severe harm to the "stability, cohesiveness and well being of the communities in the vicinity of the reactor." *Id.* In petitioner's view, citizens have lost confidence in the ability of community institutions to function effectively during a crisis; therefore the renewed danger of nuclear accidents would impose great strains on the community infrastructure. Moreover, PANE asserts, restarting TMI-1 would perpetuate the area's image as an undesirable location for residents and businesses, thus causing permanent damage to the economic and social health of the community.

Thus PANE's first contention deals with individual health; its second addresses the social and economic impacts that perceived nuclear hazards might create in the communities in the vicinity of Three Mile Island. Both contentions allege environmental effects within the meaning of NEPA.

1. *Potential damage to psychological health*

The President's Commission on the Accident at Three Mile Island reported that the "major health effect of the accident appears to have been on the mental health of the people living in the region of Three Mile Island and of the workers at TMI." REPORT OF THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND, THE NEED FOR CHANGE: THE LEGACY OF TMI at 35 (Oct. 1979), JA 267. As the Nuclear Regulatory Commission's staff has acknowledged, a great deal of study and attention has been devoted to attempts to measure the effects of the March 1979 accident at TMI-2 upon persons in the area, "including attempts to measure effects on mental health." JA 177. The staff listed a number of separate studies, conducted by organizations including the Hershey Medical Center, the Pennsylvania Department of Health, the Western Psychiatric Institute of the University of Pittsburgh, and Central Pennsylvania Blue Shield, that considered the psychological effects of the Three Mile Island accident. *Id.*

Nevertheless, the Commission's brief contends that the psychological effects alleged by PANE, which were caused by the TMI-2 accident and would assertedly be perpetuated by restart of TMI-1, are beyond the scope of NEPA. Commission's brief at 50-55. This assertion is far-reaching. Regardless of the severity of psychological health effects, the position taken in the Commission's brief would exclude them from consideration at any stage of the NEPA procedures relating to any proposed federal action. We find this interpretation of NEPA unpersuasive.[6] The Commission's brief ignores the simple fact

---

[6] The question whether NEPA requires consideration of psychological health effects is an issue of law. *See Hanly v. Kleindienst*, 471 F.2d 823, 838 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973). Because NEPA is a mandate addressed by Congress to all federal agencies, 42 U.S.C. §§ 4331(b), 4332(2) (1976), the Commission's position is not entitled to

that effects on psychological health are effects on the health of human beings.

In the National Environmental Policy Act, Congress accorded prominence to the effects of government actions on health and safety. NEPA was designed to "promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." 42 U.S.C. § 4321 (1976). The Act declared a national environmental policy of "encourag-[ing] productive and enjoyable harmony between man and his environment," *id.*, and explicitly recognized that each person "should enjoy a healthful environment," *id.* § 4331(c).[7] In its regulations implementing NEPA's procedural requirements, the Council on Environmental Quality required agencies to consider "[t]he degree to which the proposed action affects public health and safety" as a factor in deciding whether a federal action "significantly" affected the human environment. 40 C.F.R. § 1508.27(b)(2) (1981). In short, "[n]o subject to be covered by an EIS can be more important

---

the deference that courts must give to an agency's interpretation of its governing statute. *See FEC v. Democratic Senatorial Campaign Committee*, —— U.S. ——, ——, 50 U.S.L.W. 4001, 4004 (Nov. 10, 1981).

[7] 42 U.S.C. § 4331(b) (1976) establishes the goals of "assur[ing] for all Americans *safe, healthful*, productive, and esthetically and culturally pleasing surroundings," *id.* § 4331(b)(2), and "attain[ing] the widest range of beneficial uses of the environment without degradation, *risk to health or safety*, or other undesirable and unintended consequences," *id.* § 4331(b)(3) (emphases added). *See* 40 C.F.R. § 1508.8 (1981) ("effects" under NEPA include direct, indirect, and cumulative health effects); *id.* § 1508.27 (interpretation of whether action has "significant" impact on human environment includes "degree to which the proposed action affects public health and safety"); 115 Cong. Rec. 40416 (1960) (statement of Senator Jackson that NEPA declares that "we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the health of mankind").

than the potential effects of a federal program upon the health of human beings." *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F.Supp. 908, 927 (D. Ore. 1977).[8]

We conclude that, in the context of NEPA, health encompasses psychological health. To implement a national policy based on "the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man," 42 U.S.C. § 4331(a) (1976), Congress required each federal agency to utilize a "systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts." *Id.* § 4332(2)(A); *see* 40 C.F.R. §§ 1502.6, 1507.2 (1981); *cf. Chelsea Neighborhood Ass'ns v. U.S. Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975) (social as well as physical sciences relevant under NEPA; agency must consider dangers of emotional and physical isolation of high-rise apartment building, which might as a result become a "human jungle").

Although we are not aware of any cases that have considered the cognizability of post-traumatic psychological health effects under NEPA, it is not surprising that this is an issue of first impression. Americans have never before experienced the psychological aftermath of a major accident at a nuclear power plant, one that aroused fears of a nuclear core meltdown and led to mass evacua-

---

[8] *See Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service*, 487 F.2d 1029, 1039-1040 (D.C. Cir. 1973) (allegations that inadequate water run-off system will endanger health by causing floods; agency must consider "genuine issues as to health" before deciding whether to prepare an environmental impact statement); *Nat'l Organization for Reform of Marijuana Laws v. U.S. Dep't of State*, 452 F.Supp. 1226, 1232 (D. D.C. 1978) (department must prepare EIS with respect to U.S. participation in herbicide spraying of marijuana and poppy plants in Mexico because of potential health hazards associated with contaminated marijuana).

tion from the surrounding communities. *See* REPORT OF THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND, *supra*, JA 257-271. PANE alleges that restarting TMI-1 would perpetuate the psychological health effects of the TMI-2 accident—intense anxiety, tension, and fear accompanied by physical disorders. Despite the sweeping language of Judge Wilkey's dissent, PANE is not seeking to extend NEPA to "mere 'anxieties.'" Wilkey dissent at 11.

Nevertheless, the Commission's brief contends that psychological distress is beyond the scope of NEPA because it is not readily quantifiable. Commission's brief at 51-52. The Commission's staff was unable to state "with any degree of certainty whether the psychic distress associated with continued operation of the TMI 1 facility is sufficiently susceptible of measurement to permit a meaningful assessment of the phenomenon." 11 NRC at 305, JA 71. On the other hand, the Licensing Board asserted that psychological factors were sufficiently quantifiable to be considered, noting that "some quantification of stress upon the community is being undertaken by responsible organizations." 11 NRC at 302, JA 68. NEPA, moreover, does not authorize federal agencies to deal with intangible factors by ignoring them. It expressly instructs all federal agencies to identify and develop methods and procedures "which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations." 42 U.S.C. § 4332(2)(B) (1976).[9] This expression of congressional purpose led the Commission's Licensing Board to conclude, correctly, that "[p]recise

---

[9] In its binding regulations to implement NEPA's procedural requirements the Council on Environmental Quality defined the term "human environment" as "the natural and physical environment and the relationship of people with that environment." 40 C.F.R. § 1508.04 (1981).

numerical quantification is not necessary" under NEPA. 11 NRC at 302, JA 68.

To support its position that "psychological distress" need not be considered at all in the NEPA process, the Commission's brief relies on cases that rejected the cognizability of sociologically based community anxieties. Commission's brief at 50-55. In these cases neighborhood associations, businesses, or other groups unsuccessfully sought to use NEPA to block or delay proposed construction of government projects—low-income housing, federal detention centers, Job Corps centers, postal service facilities—primarily because they were afraid the projects would change the character of the neighborhood, reduce property values, and increase the dangers of crime. *See, e.g., Como-Falcon Community Coalition, Inc. v. U.S. Dep't of Labor*, 609 F.2d 342, 345-346 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980) (Job Corps center); *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976) (low-rent housing for low-income families); *Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service*, 487 F.2d 1029, 1037 (D.C. Cir. 1973) (bulk mail postal facility in suburban area); *First Nat'l Bank of Chicago v. Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973) (federal parking garage and detention center in downtown area); *Hanly v. Kleindienst*, 471 F.2d 823, 833 & n.10 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) (detention center in downtown area not far from residential apartments). None of these cases, of course, presents the holocaust potential of an errant nuclear reactor.

In these and other cases federal courts have consistently rejected the contention that socioeconomic anxieties are environmental impacts within the meaning of NEPA. The agency fulfills its responsibilities under NEPA in this context if it considers and mitigates the underlying causes for alarm, such as the possibility of increased

noise, increased crime, and increased congestion. "Concerned persons might fashion a claim, supported by linguistics and etymology, that there is an impact from people pollution on 'environment,' if the term be stretched to its maximum," Judge Leventhal explained. "We think this type of effect cannot fairly be projected as having been within the contemplation of Congress." *Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service, supra*, 487 F.2d at 1037; *see Nucleus of Chicago Homeowners Ass'n v. Lynn, supra*, 524 F.2d at 231.

In this case, in contrast, PANE is not asking the agency to evaluate the effect of "people pollution" on the environment, but rather the effect of a governmental decision on human health. We conclude that PANE's allegation—in the wake of a unique and traumatic nuclear accident—that renewed operation of TMI-1 may cause medically recognized impairment of the psychological health of neighboring residents is cognizable under NEPA.

The key to our decision is the potential effect on health. Not all physical effects have an impact on physical health; similarly, not all psychological effects rise to the level of psychological health effects. In our view, Congress intended to include psychological *health* within the meaning of "health" for purposes of NEPA. NEPA does not encompass mere dissatisfactions arising from social opinions, economic concerns, or political disagreements with agency policies.[10] It does apply to post-

[10] *See* cases cited in text *supra*. Similarly, in the esthetic realm Judge Leventhal recognized that some effects were intended by Congress to be considered and that others, pertaining "essentially to issues of individual and potentially diverse tastes," were outside the scope of NEPA. *See Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service, supra* note 8, 487 F.2d at 1038-1039. He referred to psychological factors as an analogy; in both realms, he wrote, some questions are "not readily translatable into concrete

traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe. Therefore, the severity of a psychological effect is not only relevant to whether an EIS is required under NEPA, as Judge Wilkey concedes, Wilkey dissent at 13, but also to the cognizability of the impact under the statute.

We need not attempt to draw a bright line in this case. Three Mile Island is, at least so far, the only event of its kind in the American experience. We cannot believe that the psychological aftermath of the March 1979 accident falls outside the broad scope of the National Environmental Policy Act.

2. *Possible deterioration of the community*

PANE's second contention alleges that the communities surrounding Three Mile Island would be severely damaged by the proposed restart of the TMI-1 facility because fears of nuclear accidents will diminish citizen confidence in local institutions, cause local businesses and residents to leave the area, and discourage potential newcomers who perceive the area as an undesirable location. JA 85-86. The Commission concedes that this contention presents a "classical 'socio-economic' issue." Commission's brief at 49. Social and economic effects, also described as "secondary impacts," do not by themselves require preparation of an environmental impact statement. 40 C.F.R. § 1508.04 (1981) (mandatory Council on Environmental Quality regulations).[11] However,

---

measuring rods." *Id., quoting Hanly v. Kleindienst, supra* note 6, 471 F.2d at 833 n.10. But the difficulty of measurement does not exclude the beauty of scenery in the national parks from consideration under NEPA, nor should it exclude the medically diagnosed effects of traumatic accidents on the human mind.

[11] *See Como-Falcon Community Coalition, Inc. v. U.S. Dep't of Labor*, 609 F.2d 342, 345-346 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); *Image of Greater San Antonio, Texas v. Brown*, 570 F.2d 517, 522-523 (5th Cir. 1978);

when an environmental impact statement is prepared, it must discuss economic or social effects that are interrelated with other environmental effects. *Id.* Deterioration of a community's economic base or social stability, as alleged in PANE's second contention, is a cognizable "secondary impact" under NEPA. *See, e.g., City of Rochester v. U.S. Postal Service*, 541 F.2d 967, 973 (2d Cir. 1976) (danger of economic and physical deterioration in downtown area, urban decay and blight); *Trinity Episcopal School Corp. v. Romney*, 523 F.2d 88, 93-94 (2d Cir. 1975) (displacement and relocation of residents, decay and blight, implications for city growth policy and neighborhood stability). If NEPA requires the Commission to prepare a supplemental EIS regarding the TMI-1 restart decision because the agency makes a threshold finding of significant new information on psychological health effects, *see* Part II-C *infra*, PANE's contentions regarding secondary effects on the community must be evaluated in the supplemental EIS.

B. *Applicability of NEPA to the TMI-1 Restart Decision*

PANE contends that the March 1979 accident at TMI-2 significantly changed the psychological and socioeconomic effects of operating TMI-1. Therefore, PANE argues, the Commission must comply with NEPA before it decides whether to authorize restart of TMI-1's operations. This assertion does not depend on the happen-

---

Breckinridge v. Rumsfeld, 537 F.2d 864, 866 (6th Cir. 1976), *cert. denied*, 429 U.S. 1061 (1977); *Monarch Chemical Works, Inc. v. Exon*, 466 F.Supp. 639, 655-656 (D. Neb. 1979); *Nat'l Ass'n of Gov't Employees v. Rumsfeld*, 418 F.Supp. 1302, 1306 (E.D. Pa. 1976); *Nat'l Ass'n of Gov't Employees v. Rumsfeld*, 413 F.Supp. 1224, 1229-1230 (D. D.C. 1976), *aff'd mem.*, 556 F.2d 76 (D.C. Cir. 1977). *Contra, Jackson County, Mo. v. Jones*, 571 F.2d 1004, 1007 (8th Cir. 1978) (proposed closing of most of an Air Force Base); *McDowell v. Schlesinger*, 404 F.Supp. 221 (W.D. Mo. 1975) (same).

stance that TMI-1 was shut down for refueling at the time of the accident. PANE relies more generally on the continuing close supervision that the Commission exercises over nuclear power plants under the Atomic Energy Act. We agree with PANE that the extent of the Commission's statutory responsibilities over licensed nuclear facilities creates a continuing obligation to comply with NEPA.[12]

The Commission's brief contends that its pending decision on whether to allow resumption of operations at TMI-1 is not a "major federal action" within the National Environmental Policy Act and is therefore not subject to NEPA's requirements. Conceding that the initial grant of an operating license requires preparation of an EIS, the brief asserts that, once a private activity such as a nuclear reactor has been licensed, federal involvement in its continuation is "limited and discontinuous" and therefore "lacks the elements of federal purpose and discretion generally associated with the requirement for impact statements." Commission's brief at 46. This position takes too narrow a view of the relevant federal activity. The "major federal action" in the case of TMI-1 is not solely the initial licensing decision, but the Commission's continued exercise of supervisory responsibility over its operation and maintenance.

The position argued in the Commission's brief is inconsistent with binding regulations promulgated by the Council on Environmental Quality (CEQ) and with previous judicial decisions defining "major federal actions" for purposes of NEPA. The CEQ regulations, applicable to all federal agencies including the Commission, 40 C.F.R. § 1500.3 (1981), were expressly designed to establish uniform procedures for implementing NEPA

---

[12] We remand the record in this case to the Commission to determine what procedures NEPA requires in light of its evaluation of alleged psychological health effects. *See* Part II-C *infra*.

and to eliminate inconsistent agency interpretations. 43 Fed. Reg. 55978 (1978); *see Andrus v. Sierra Club*, 442 U.S. 347, 356-357 (1979).[13] "Federal action," under the regulations, encompasses "new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies." 40 C.F.R. § 1508.18(a) (1981).[14]

The Commission's NEPA responsibilities did not come to an end when it prepared an initial EIS; the "continuing activity" of regulating TMI-1 is federal action within the scope of NEPA. The Commission has an ongoing responsibility to assure that nuclear power plants will operate without endangering the health and safety of the public. 42 U.S.C. §§ 2012(e), 2201(b), 2236 (1976). It maintains a resident inspector at each nuclear facility, *see* 10 C.F.R. § 50.70(b) (1981), and operates a licensing program for nuclear power plant operators, *see id.* §§ 55.1-55.60.

In the immediate aftermath of the nuclear accident at TMI-2 the Commission ordered Metropolitan Edison, the

---

[13] The CEQ regulations were issued pursuant to Executive Order 11991, May 24, 1977, 3 C.F.R. 124 (1978). The Executive Order was based on the President's constitutional and statutory authority, including NEPA, the Environmental Quality Improvement Act, and § 309 of the Clean Air Act. The Executive Order delegated the President's authority to the CEQ, an agency created by NEPA. 43 Fed. Reg. 55978 (1978).

[14] We are not persuaded by the Commission's argument that the TMI-1 restart proceeding is exempt from NEPA because it is an enforcement action. *See* 10 C.F.R. § 51.5(d)(1) (1981) (NRC regulations implementing more general CEQ guidelines). Unlike initiating an investigation or filing a complaint in federal court, resumption of nuclear operations at TMI-1 might have a direct and immediate effect on psychological health or community well-being.

licensee, to keep TMI-1 in a cold shutdown condition pending further order by the Commission, and stated that a hearing would be held before the reactor would be authorized to resume operation. The order explains that the agency "presently lacks the requisite reasonable assurance that the same licensee's Three Mile Island Unit No. 1 facility * * * can be operated without endangering the health and safety of the public," 44 Fed. Reg. 40461 (1979), language that echoes the Atomic Energy Act. Pursuant to its July 1979 order, the Commission received written and oral testimony at an evidentiary hearing from witnesses presented by the licensee, the Commission's staff, the Commonwealth of Pennsylvania, and five intervenors. Atomic Safety and Licensing Board, Partial Initial Decision (Procedural Background and Management Issues) at 12 (Aug. 27, 1981). The record of the proceeding covers more than 22,000 transcript pages. Memorandum on the Status of the Three Mile Island Unit 1 Restart Proceeding, filed by the Commission with this court on November 25, 1981. These regulatory activities fall squarely within the language of the CEQ regulation defining "federal action." 40 C.F.R. § 1508.18(a) (1981) (quoted *supra*).

Judicial decisions antedating the CEQ regulations defined "federal action" similarly in concrete factual contexts. The central issue in determining the applicability of NEPA to federally assisted or federally regulated projects was whether agency decisions were yet to be made, and whether decisions, "although already made, remain[ed] open to revision." *Jones v. Lynn*, 477 F.2d 885, 890 (1st Cir. 1973). In *Jones v. Lynn* the basic loan and capital grant contract for an urban renewal project had been executed before NEPA entered into effect, but the court held that NEPA procedures must be followed as long as the federal agency "remains meaningfully involved in a project" and has "retained any significant discretionary powers." *Id.* at 889-890 (remanding for

findings by District Court).[15] In *WATCH (Waterbury Action to Conserve Our Heritage Inc.) v. Harris*, 603 F.2d 310, 317-318 (2d Cir.), *cert. denied*, 444 U.S. 995 (1979), the federal Department of Housing and Urban Development had authorized demolition of buildings within a specified urban renewal area but retained power to veto specific actions by local authorities. When HUD received new information about the potential historic value of structures within the demolition area, it imposed a temporary freeze on further acquisitions and demolitions, gathered some data about the structures, and then authorized demolition to continue. A local organization sought judicial review of the agency's failure to follow NEPA procedures before deciding whether to continue with the demolition project. The Second Circuit, recognizing that HUD retained "significant control over the project," and that the agency had recognized its continuing responsibility by imposing a freeze, held that HUD was required to comply with NEPA. 603 F.2d at 318, 326.

The Commission's brief cannot convincingly distinguish these precedents by asserting that, unlike this case, they involved "a more or less continuing agency decision to sustain an ongoing program that the agency has discretion to terminate at any time." Commission's brief at 46. The Commission's regulatory responsibilities with regard to TMI-1 and other nuclear reactors place it in

---

[15] This principle has been applied to require agencies to follow NEPA procedures in a number of projects approved and commenced before the effective date of the Act. *See, e.g., Hart v. Denver Urban Renewal Authority*, 551 F.2d 1178, 1181 (10th Cir. 1977) (urban renewal project); *Swain v. Brinegar*, 517 F.2d 766, 773-774 (7th Cir. 1975) (highway construction); *Scherr v. Volpe*, 466 F.2d 1027, 1034-1035 (7th Cir. 1972) (highway construction); *Arlington Coalition on Transportation v. Volpe*, 458 F.2d 1323, 1328 (4th Cir. 1972), *cert. denied*, 409 U.S. 1000 (1972) (highway construction).

an analogous position; therefore, it must continue to comply with NEPA's requirements.

C. *The Commission's Responsibilities Under NEPA*

If the agency's "continuing activities" are within the scope of NEPA, the CEQ regulations require it to prepare a supplemental environmental impact statement in two situations: (1) if the agency makes substantial changes in the proposed action that are relevant to environmental concerns, or (2) if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. 40 C.F.R. § 1502.9(c)(1) (1982).[16] Supplemental impact statements shall be prepared, circulated, and filed in the same fashion as draft or final environmental impact statements. *Id.* § 1502.9(c)(4). These regulations implement the broad purpose of NEPA: to require the federal government to assume "continuing responsibility" to promote environmental values. *See* 42 U.S.C. § 4331(b) (1976). NEPA itself does not expressly provide for supplemental impact statements, but the Supreme Court has declared that the CEQ implementing regulations are "entitled to substantial deference" as an interpretation of NEPA. *Andrus v. Sierra Club*, *supra*, 442 U.S. at 358.[17]

---

[16] If no "substantial changes" occur and no "significant new circumstances or information relevant to environmental concerns" arise, the regulatory agency will have no obligation to take any further action under NEPA. The environmental impacts described in the original EIS will be adequate to describe the continuing effects of the regulated activity. Therefore, the court's holding—which simply reiterates well established principles—does not "significantly increase the NEPA burden on regulatory agencies in the future." Wilkey dissent at 20.

[17] The Court rested its deference on the CEQ's statutory responsibility under NEPA and on the "detailed and comprehensive process" by which the CEQ transformed advisory guidelines into mandatory regulations applicable to all federal agencies. 442 U.S. at 358.

In this case PANE contends that the accident at TMI-2 in March 1979 was a "significant new circumstance" that dramatically altered the environmental effects of operating TMI-1. It cites not only the CEQ regulations, but earlier judicial decisions that required preparation of a supplemental EIS to take changed circumstances and new information into account. In *Essex County Preservation Ass'n v. Campbell*, 536 F.2d 956, 961 (1st Cir. 1981), relying on federal highway regulations, the court required a supplemental EIS for a proposed highway project after a state moratorium on widening of a feeder highway reduced the potential flow of traffic to the proposed highway segment. In several District Court cases, discovery of archeological sites within an affected area has been held to require a supplemental EIS. *Libby Rod & Gun Club v. Poteat*, 457 F.Supp. 1177, 1188-1189 (D. Mont. 1978) (Army Corps of Engineers dam project); *Aluli v. Brown*, 437 F.Supp. 602, 606 (D. Hawaii 1977), *rev'd in part on different issue*, 602 F.2d 876 (9th Cir. 1979) (Navy bombing practice on Hawaiian island); *Nelson v. Butz*, 377 F.Supp. 819, 822 (D. Minn. 1974) (proposed flooding of area by dam construction).[18]

At this stage, PANE's allegations of psychological health effects and community deterioration do not justify

---

[18] Other federal courts have recognized the general rule that a supplemental EIS is required if the agency receives significant new information, although they have not required a supplemental EIS under the circumstances of the particular case. *See Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1023-1025 (9th Cir. 1980) (new information would have required supplemental EIS, but during pendency of appeal agency had made extensive expert studies of new data and had reasonably concluded that environmental effects would not be significant); *Society for Animal Rights, Inc. v. Schlesinger*, 512 F.2d 915 (D.C. Cir. 1975) (as project proceeds, if department gathers "new findings of significance," it must incorporate them into its analysis by amending the original EIS).

an order to the Commission to prepare a supplemental EIS. It is well established that, under NEPA, the agency in charge of a proposed federal action is authorized to make the threshold determination of whether an EIS is required. *See WATCH v. Harris*, *supra*, 603 F.2d at 317-318, 326; *Asphalt Roofing Manufacturers Ass'n v. ICC*, 567 F.2d 994, 1004 (D.C. Cir. 1977); *Hanly v. Kleindienst*, *supra*, 471 F.2d at 828. In this case, however, the Commission staff did not consider psychological health effects in its environmental impact appraisal, JA 272-316, nor did it receive any evidence in support of PANE's contentions. When the Commissioners excluded psychological stress from the TMI-1 restart proceeding, none of the four separate opinions specifically addressed NEPA's requirements for issuance of a supplemental EIS, nor did any Commissioner evaluate any of the existing studies regarding psychological and community effects. *See* 12 NRC at 609-626, JA 3-20.[19] Under the circumstances, we remand the record to the Commission to determine whether to prepare a supplemental EIS.

If the agency finds significant new circumstances or information on psychological health effects, the CEQ regulations require it to prepare a supplemental EIS regarding both psychological health effects and secondary impacts on the well-being of surrounding communities. 40 C.F.R. § 1502.9(c)(1) (1981). On the other hand, if the agency

---

[19] Commissioner Hendrie asserted that psychological impacts were outside the scope of NEPA. 12 NRC at 612, 615-618, JA 6, 9-12. Commissioner Ahearne conceded that the Commission should consider psychological effects, but maintained that Commission inquiry into technical safety factors was sufficient to satisfy NEPA's mandate. 12 NRC at 609-611, JA 3-5. Commissioner Bradford agreed with the Licensing Board that the Commission should evaluate psychological evidence, but did not propose preparation of an EIS, 12 NRC at 621-626, JA 15-20, and Commissioner Gilinsky did not discuss NEPA's requirements, 12 NRC at 619-620, JA 13-14. Chairman Palladino, subsequently appointed to the Commission, wrote no opinion.

finds that the circumstances or information are not new, or not significant, it need not prepare a supplemental EIS. The agency's determination, if appealed, will be upheld as long as it is reasonable—the same standard of judicial review that we apply to an agency's determination not to issue an EIS in the first instance. *See Izaak Walton League of America v. Marsh*, 655 F.2d 346, 371 (D.C. Cir. 1981) ("rule of reason" in reviewing compliance with NEPA); *cf. Environmental Defense Fund v. Marsh*, 651 F.2d 983, 991-992 (5th Cir. 1981) (same standard for review of agency decision not to issue EIS or decision not to issue supplemental EIS); *Monarch Chemical Works, Inc. v. Thone*, 604 F.2d 1083, 1087 (8th Cir. 1979) (same).

We agree with the Ninth Circuit's recent discussion of the respective roles of agencies and courts and the "rule of reason" as applied to an agency's decision not to issue a supplemental EIS:

> When new information comes to light the agency must consider it, evaluate it, and make a reasoned determination whether it is of such significance as to require implementation of formal NEPA filing procedures. Reasonableness depends on such factors as the environmental significance of the new information, the probable accuracy of the information, the degree of care with which the agency considered the information and evaluated its impact, and the degree to which the agency supported its decision not to supplement with a statement of explanation or additional data.

Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017, 1024 (9th Cir. 1980).[20]

---

[20] Other federal courts have recognized that, before an agency decides whether to issue an EIS, it must undertake at least a preliminary investigation. *See Como-Falcon Community Coalition, Inc. v. U.S. Dep't of Labor, supra* note 11, 609 F.2d at 345 (finding of whether an agency acted in good faith discretion in deciding not to issue EIS depends in part

Until a federal agency has fulfilled its obligations under NEPA, it should generally not proceed with its ultimate decision on whether to proceed with a proposed action. NEPA procedures are designed to ensure that environmental information is available to public officials and citizens before decisions are made, so that environmental considerations are part of the agency's decision-making process. *See Weinberger v. Catholic Action of Hawaii/Peace Education Project*, —— U.S. ——, ——, 50 U.S.L.W. 4027, 4028-4029 (Dec. 1, 1981); *Realty Income Trust v. Eckerd*, 564 F.2d 447, 456 (D.C. Cir. 1977); 40 C.F.R. §§ 1500.1(b), 1502.2(g) (1981). Under appropriate circumstances, federal courts will grant injunctive relief to preserve the status quo until the requirements of NEPA have been satisfied. *See Realty Income Trust v. Eckerd, supra*, 564 F.2d at 456-457.

In this case the court issued an order on January 7, 1982 that the Commission not make a decision to restart TMI-1 until it had complied with its obligations under NEPA. Subsequently, however, operating officials at Three Mile Island announced that leaks and corrosion in thousands of steam generator tubes in TMI-1 would probably delay the restart for six to twelve months. *See Corrosion Leads To More Delays At 3 Mile Island*, New York Times, February 11, 1982, A18, at col. 1. Recognizing that injunctive relief was no longer necessary to preserve the status quo, the court on April 2, 1982 is-

---

on the "depth of study of the particular problem"); *Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service, supra* note 8, 487 F.2d at 1039 (in reviewing environmental assessment court will ask whether agency decided not to issue EIS after a "hard look" at the problem rather than "bald conclusions, unaided by preliminary investigation"); *cf. City of Davis v. Coleman*, 521 F.2d 661, 670-671 (9th Cir. 1975) (NEPA plaintiff has standing without offering proof of alleged effects; otherwise plaintiff would be required to conduct the "same environmental investigation that he seeks in his suit to compel the agency to undertake").

sued an amended judgment lifting the injunction. The amended judgment, which remains in effect, requires the Commission to give 30 days' notice to this court and to petitioner if the Commission intends to make a decision on restarting TMI-1 before complying with its obligations under NEPA. When such notice is given, it will be time enough for this court to decide whether an injunction should issue to enforce the mandate of the National Environmental Policy Act.

In the wake of the most publicized nuclear accident of our time, the people of the Three Mile Island area—and the people of the nation as a whole—are entitled to the protections Congress provided in the National Environmental Policy Act. The government must not proceed to make decisions that might have a momentous effect on the psychological health and community well-being of its citizens without first giving careful, responsible consideration to the consequences its actions might have. By enacting NEPA Congress meant to assure that no federal decision—especially one of this importance—would be made in the shadow of environmental ignorance.

III. Conclusion

We have concluded that psychological health is cognizable under NEPA and that the Commission's statutory responsibilities over licensed nuclear facilities create a continuing obligation to comply with the requirements of the statute. We therefore remand the record in this case to the Commission for study of potential psychological health effects and for a decision whether a supplemental EIS is necessary.

So ordered.

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

SEPTEMBER TERM, 1981

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY, PETITIONER

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND UNITED STATES OF AMERICA, RESPONDENTS

METROPOLITAN EDISON COMPANY *et al.* (PUBLIC UTILITIES), INTERVENORS

Petition for Review of an Order of the United States Nuclear Regulatory Commission

Before WRIGHT, *Circuit Judge*, MCGOWAN, *Senior Circuit Judge*, and WILKEY, *Circuit Judge*.

AMENDED JUDGMENT

This cause came on to be heard on a petition for review of an order of the United States Nuclear Regulatory Commission and was briefed and argued by counsel. A judgment was issued on January 7, 1982, Judge Wilkey dissenting. In light of changed circumstances and further consideration, this court has decided to modify its order to the Commission. On consideration thereof,

It is ORDERED and ADJUDGED by this court that, for the reasons stated in the opinion for the court issued this day, the record in this case is remanded to the Commission for a determination whether, since the prep-

aration of the original environmental impact statement for the nuclear facility at Three Mile Island Unit 1 (TMI-1), significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility. The Commission may choose the procedures by which it makes this determination. If the Commission finds that such significant circumstances or information exist, it shall prepare a supplemental environmental impact statement which considers not only effects on psychological health but also effects on the well-being of the communities surrounding Three Mile Island.

It is FURTHER ORDERED and ADJUDGED by this court that, in light of the current operating difficulties at TMI-1, it is no longer necessary to preserve the status quo to enjoin the Commission from deciding to restart TMI-1 until it has complied with the requirements of the National Environmental Policy Act (NEPA). The injunction granted on January 7, 1982 is hereby vacated. If subsequently the Commission intends to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA, it shall provide the court and the petitioner with 30 days' notice thereof.

Per Curiam
For the Court

George A. Fisher
Clerk

Circuit Judge Wilkey dissents for the reasons stated in his dissenting opinion filed this day.

WILKEY, *Circuit Judge*: This opinion has two distinct parts. Part I is my dissent from my two colleagues' decision on the applicability of the National Environmental Policy Act (NEPA)[1] to this case.[2] Part II has been joined by Judge McGowan, and represents the opinion of the court on the applicability of the Atomic Energy Act (AEA)[3] to this case. The net result is that the court holds that NEPA requires consideration of alleged psychological health effects, while the AEA does not.

This may have the appearance of a split decision, but the reality is otherwise. The critical issue is NEPA, and the court's determination produces an extraordinary result. Judge Wright and Judge McGowan hold that in the proceedings on the restart of Three Mile Island Unit 1 (TMI-1), which was not involved in the accident at Three Mile Island Unit 2 (TMI-2), the Nuclear Regulatory Commission (NRC) must consider "the potential psychological health effects of renewed operation of TMI-1."[4] This requires consideration of an "impact" on health—psychological stress—which has never before been held cognizable under NEPA. A similar decision under the AEA would have compounded the problem, but the NEPA decision today suffices to give petitioner People Against Nuclear Energy (PANE) essentially what it has sought: a court-imposed paralysis of nuclear power at Three Mile Island, and potentially elsewhere as well. Thus although I am pleased that my view on the

---

[1] 42 U.S.C. §§ 4321-4369 (1976 & Supp. III 1979).

[2] Contrary to Judge Wright's assertion, *see* majority opinion (maj. op.) at 8 n.4, this dissent focuses on the opinion and judgment issued today. Had I been required to deal comprehensively with the mistakes in the January judgment which the majority has corrected, this dissent would have been longer and dealt with more issues.

[3] 42 U.S.C. §§ 2011-2296 (1976 & Supp. III 1979).

[4] Maj. op. at 3.

AEA issue has prevailed, I have no illusion that I am anything other than the chief dissenter in this case.

It is worth noting, and perhaps taking solace in, the majority's[5] partial retreat from the judgment it so hastily issued on 7 January 1982.[6] The injunction

---

[5] All further uses in this opinion of "the majority" refer to Judge Wright and Judge McGowan, who constitute the majority of the court on the NEPA issue.

[6] The majority's 7 January 1982 Judgment, from which I dissented, declared:

> This cause came on to be heard on a petition for review of an order of the United States [Nuclear] Regulatory Commission and was briefed and argued by counsel.
>
> On consideration thereof, it is ORDERED and ADJUDGED by this court that the order of the Nuclear Regulatory Commission under review in this cause is hereby vacated.
>
> It is FURTHER ORDERED and ADJUDGED by this court that the Commission shall prepare an environmental assessment regarding the effects of the proposed restart of the nuclear facility at Three Mile Island Unit One (TMI-1) on the psychological health of neighboring residents and on the well-being of the surrounding communities. The Commission shall then determine, on the basis of this environmental assessment, whether the National Environmental Policy Act requires preparation of a full environmental impact statement.
>
> It is FURTHER ORDERED and ADJUDGED by this court that, until the Commission has complied with the requirements of the National Environmental Policy Act as described in the preceding paragraph, it shall not make a decision to restart TMI-1.
>
> It is FURTHER ORDERED and ADJUDGED by this court that the Commission shall prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.
>
> Opinions to follow.

On 2 April 1982 the majority issued an Amended Judgment, from which I also dissented, which contained the alterations announced in today's opinions:

> This cause came on to be heard on a petition for review of an order of the United States Nuclear Regulatory

against TMI-1's restart has been lifted,[7] and, in addi-

Commission and was briefed and argued by counsel. A judgment was issued on January 7, 1982, Judge Wilkey dissenting. In light of changed circumstances and further consideration, this court has decided to modify its order to the Commission. On consideration thereof,

It is ORDERED and ADJUDGED by this court that this case is remanded to the Commission for a determination whether, since the preparation of the original environmental impact statement for the nuclear facility at Three Mile Island, Unit 1 (TMI-1), significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility. The Commission may choose the procedures by which it makes this determination. If the Commission finds that such significant circumstances or information exist, it shall prepare a supplemental environmental impact statement which considers not only effects on psychological health but also effects on the well-being of the communities surrounding Three Mile Island.

It is FURTHER ORDERED and ADJUDGED by this court that, in light of the current operating difficulties at TMI-1, it is no longer necessary in order to preserve the status quo to enjoin the Commission from deciding to restart TMI-1 until it has complied with the requirements of the National Environmental Policy Act (NEPA). The injunction granted on January 7, 1982 is hereby vacated. If subsequently the Commission intends to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA, it shall provide the court and the petitioner with thirty days' notice thereof.

Opinions to follow.

[7] The reason for lifting the injunction is that technical problems at the plant will delay restart regardless of this court's decision. *See* maj. op. at 27-28. The majority indicates that it stands ready to consider reinstating the injunction if the plant is ready to open prior to the NRC's decision on the need for a supplemental environmental impact statement (EIS). As argued below, the majority's earlier injunction was based on faulty analysis and an erroneous legal standard. *See* pp. 24-26 *infra*.

tion, the majority has corrected two clear errors of NEPA law contained in its original judgment.[8]

Unfortunately, the basic error remains. The extension of NEPA to encompass psychological stress is unwarranted, unprecedented, and inconsistent with relevant decisions in this and other circuits. This novel hurdle, well designed to delay the development of nuclear power (contrary to the national policy determined by Congress and the Executive), is thoroughly consistent with this court's track record of using NEPA to delay the development of important energy sources.[9] I dissent.

---

[8] The two errors were ordering an environmental assessment (discussed at pp. 21-22 *infra*) and ordering consideration of the socioeconomic effects on surrounding communities (discussed at pp. 22-23 *infra*).

In my view the majority also erred in ordering the Commission to prepare a statement explaining its reasons for finding that the AEA does not require consideration of psychological stress. There simply is no requirement that an agency provide *any* explanation for its interpretation of its governing statute. If an agency does provide an explanation, a reviewing court must defer to it so long as it is reasonable. *FEC* v. *Democratic Senatorial Campaign Comm.*, 102 S. Ct. 38, 46 (1981). The Supreme Court has noted that "the thoroughness, validity and consistency of an agency's reasoning are factors that bear upon the amount of deference to be given an agency's ruling," *id.* at 44, so that an unexplained or poorly reasoned interpretation is entitled to little deference. *See, e.g., Adamo Wrecking Co.* v. *United States*, 434 U.S. 275, 287 n.5 (1978). Nothing in these decisions, however, requires a particular kind of explanation or authorizes an appellate court to demand a better one.

Since the NRC has complied with the 7 January judgment and produced a majority opinion on the AEA issue, this new statement forms the basis for the court's disposition on this issue. *See* pp. 29-37 *infra*.

[9] The most recent example is *Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, No. 74-1586 (D.C. Cir. 27 Apr. 1982), which invalidated a key NRC rule used in nuclear licensing. The combined effect of that decision and the one today is, as I stated in dissent,

I. National Environmental Policy Act

A. *Cognizability of Psychological Stress Under NEPA* [10]

1. *Meaning of "health" in NEPA*

There is no question that NEPA's requirements extend to effects on human health. Two of the Act's goals are to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings," [11] and to "attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences." [12] What is in question, of course, is what Congress intended by its inclusion of health as a concern. Amazingly, the majority does not find this even to be a hard question. It holds "that, in the context of NEPA,

---

"that this court has effectively taken over control of the nuclear industry. This is not the way I read either the substantive law or a judicial commission." *Id.*, slip op. at 65 (Wilkey, J., dissenting).

[10] The majority also finds that "the social and economic impacts that perceived nuclear hazards might create in the communities in the vicinity of Three Mile Island," maj. op. at 10, constitute "cognizable 'secondary impact[s]' under NEPA." *Id.* at 18. This means that these socioeconomic effects are *insufficient to require preparation of an EIS*, but must be taken into account if an EIS is otherwise mandated. *See* 40 C.F.R. § 1508.14 (1981); maj. op. at 17-18 & n.11 (citing cases).

This holding is irrelevant and unnecessary in this case. Since no new or supplemental EIS has been prepared or ordered, the majority has no occasion to instruct the NRC as to what an EIS should contain if one is prepared. At least, however, the majority has recognized that its 7 January judgment erred in ordering the Commission to consider these socioeconomic effects as part of the threshold determination of the need for a supplemental EIS. *See* pp. 22-23 *infra*.

[11] 42 U.S.C. § 4331(b)(2) (1976).

[12] *Id.* § 4331(b)(3).

health encompasses psychological health," [13] a conclusion that rests on "the simple fact that effects on psychological health are effects on the health of human beings." [14] Since petitioner PANE alleges that the restart of TMI-1 would cause "severe psychological distress" to nearby residents, the majority orders the NRC to consider this allegation under NEPA. This holding is entirely novel, and indeed is contrary to the most closely analogous precedents. In my view it extends the reach of NEPA far beyond its intended scope.

Judge Wright's opinion cites several cases holding that agencies must prepare an EIS when there is a potential effect on human health. What the opinion does not acknowledge is that in each of these cases the effect on health was caused by the federal action itself, *not* by individuals' *fears* of the federal action. Use of toxic herbicides has a potential for damaging human health, and consideration must therefore be given to these potential effects.[15] An allegedly inadequate water run-off system may lead to flooding which endangers human health, so this possibility must be considered.[16]

In the same way, operation of a nuclear power plant may cause harm to human health—for example, due to the potential for exposure to radiation—and the NRC must therefore prepare an EIS and consider these potential harms before licensing the plant. In this case, however, the NRC already has prepared a full EIS on TMI-1,

---

[13] Maj. op. at 13.

[14] *Id.* at 11-12.

[15] *See National Organization for Reform of Marijuana Laws* v. *United States Dep't of State*, 452 F. Supp. 1226, 1232 (D.D.C. 1978); *Citizens Against Toxic Sprays, Inc.* v. *Bergland*, 428 F. Supp. 908, 927 (D. Or. 1977).

[16] *See Maryland-National Capital Park & Planning Comm'n* v. *United States Postal Serv.*, 487 F.2d 1029, 1039 (D.C. Cir. 1973).

as well as an environmental appraisal relating to restart, to facilitate decisionmaking and minimize the damage that could result from the plant's operation. This undertaking is what NEPA clearly contemplates.

PANE's contention, however, is not that operation of TMI-1 will affect human health because of the dangers inherent in operation of a nuclear facility, but that individuals' *fears* of an accident at the plant, combined with their lack of confidence in the NRC, will lead to an extension of the psychological stress allegedly caused by the TMI-2 accident. It is patently obvious that this alleged effect is *entirely different* from those health effects at issue in any NEPA case relied on by the majority. Instead of being required to assess *the risk* of a proposed activity in determining whether the activity should go forward, the agency is now required to assess *how people perceive and react to the risk.* PANE's primary purpose is to force the agency to determine whether people so fear renewed operation of TMI-1 that it should not go forward, even if the agency's assessment of the actual risk indicates that the impact on health will not be significant.

This takes NEPA far beyond its intended purpose.[17] *The environmental effects of a federal activity are now to include the views of the population itself on the very*

---

[17] Petitioner notes that a Senate Report on NEPA expressed concern about "crowding, congestion, and conditions within our central cities which result in civil unrest and detract from man's social and psychological well-being," S. REP. No. 296, 91st Cong., 1st Sess. 4 (1969), and argues that this shows "particular concern with man's social and psychological well-being." Brief for Petitioner at 42. Yet this passage emphasizes only that the underlying causes of social and psychological unrest—"crowding, congestion, and conditions within our central cities"—should be addressed. Indeed, it is noteworthy that the passage relied on by PANE is specifically relevant to the many cases where local groups raised their fears about effects of a federal project on

desirability of the activity, as expressed through the alleged psychological distress people may suffer if the activity goes forward—no matter how scientifically ignorant and divorced from reality those views (fears) may be. In my view this is a judgment for Congress, and one which has already been made in the case of nuclear power. "Nuclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try nuclear energy . . . ." [18] To adopt the majority view would be to let any special interest group effectively repeal an act of Congress if it could whip up sufficient hysteria.

---

neighborhood character, property values, and the crime rate. Yet the courts uniformly have rejected the claim that NEPA requires consideration of social and psychological concerns *about* city conditions; only the conditions themselves are to be considered. *See* p. 9 & notes 19-21 *infra*.

It is true that the specific meaning of "health" in NEPA is less clear than that of "health" in the AEA. The latter was specifically aimed at preventing harm from exposure to radiation, and thus psychological harm from individual fears of nuclear power was obviously not included. Since NEPA was addressed to all agencies and a variety of health problems, the precise meaning of "health"—including whether it encompasses psychological harm—is less readily apparent. *See* note 81 *infra* (opinion for the court on the AEA issue).

That the AEA more obviously excludes psychological health effects does not, however, compel the conclusion that NEPA does encompass them. In my view it is clear that, for the reasons stated in the text above, NEPA was not intended to require agencies to engage in speculative inquiries as to how individuals may react psychologically to a particular activity. I would note also that if Judge McGowan's position—that NEPA, but not the AEA, requires consideration of psychological effects—is based on the broader coverage of NEPA, then he must concede what Judge Wright's opinion specifically tries to deny: that today's majority rationale must apply to the psychological effects of *all* actions of *all* agencies, which is broad coverage indeed.

[18] *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 557-58 (1978).

2. *Case law on psychological factors under NEPA*

Many federal courts have agreed that individuals' psychological reactions to a federal action are not properly considered under NEPA. For example, the Second Circuit has declared: "It is doubtful whether psychological and sociological effects upon neighbors constitute the type of factors that may be considered in making such a determination since they do not lend themselves to measurement." [19] Similarly, the Seventh Circuit has stated: "To the extent that this claim can be construed to mean that HUD must consider the fears of the neighbors of prospective public housing tenants, we seriously question whether such an impact is cognizable under NEPA." [20] Many other courts have agreed,[21] and these

---

[19] *Hanly* v. *Kleindienst*, 471 F.2d 823, 833 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973).

[20] *Nucleus of Chicago Homeowners Ass'n* v. *Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976).

[21] *See, e.g., Como-Falcon Community Coalition, Inc.* v. *United States Dep't of Labor*, 609 F.2d 342, 345-46 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); *Maryland-National Capital Park & Planning Comm'n* v. *United States Postal Serv.*, 487 F.2d 1029, 1037 (D.C. Cir. 1973) (fear of "an influx of low-income workers into the County" is an effect that "cannot fairly be projected as having been within the contemplation of Congress"); *First Nat'l Bank* v. *Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973) ("As regards public 'sensibilities' aroused by criminal defendants, we question whether such factors, even if amenable to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized."); *Monarch Chem. Works, Inc.* v. *Exon*, 466 F. Supp. 639, 657 (D. Neb. 1979) ("NEPA does not require an evaluation of the psychological and sociological effects of a prison on people who live nearby."); *Trinity Episcopal School Corp.* v. *Romney*, 387 F. Supp. 1044, 1078-79 (S.D. N.Y. 1974) ("[C]ommunity attitudes and fears, or the propensity of certain economic or racial groups to commit anti-social behavior, do not lend themselves to . . . objective

cases represent a clear consensus against consideration of psychological factors.

The majority tries simply to cite and then dismiss these cases as irrelevant, but their force cannot be ignored. They are based largely on the fact that psychological concerns are simply too far removed from the purpose of NEPA, which is to ensure that an agency considers the environmental effects of a decision, not the reactions of affected individuals to the risk of those environmental effects. They also rest on the inherent difficulties in attempting to measure and incorporate into the environmental analysis the differing psychological states of the affected persons.

The majority blithely dismisses this quantification problem as irrelevant,[22] thus ignoring Judge Leventhal's observation that although measurement difficulties do not necessarily prevent consideration under NEPA, they do "have a bearing on the intention of Congress, and whether it contemplated . . . a requirement of a detailed [EIS]."[23] In this case petitioner makes much of the practice of courts in measuring psychological injury. This is of dubious validity given that the assignment of monetary damages for purposes of liability is different from the measurements involved here.

Far more important, however, is that the issue before the NRC will be not how much damage was caused by the TMI-2 accident, but how much *additional* damage will result from TMI-1's restart. This issue is particularly ephemeral and speculative since it is not subject to

---

analysis and are not required in a NEPA study."), *rev'd and remanded in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

[22] *See* maj. op. at 14, 16 n.10.

[23] *Maryland-National Capital Park & Planning Comm'n* v. *United States Postal Serv.*, 487 F.2d 1029, 1038 (D.C. Cir. 1973).

measurement at all. Instead, the Commission will be forced to *predict* how every individual in the TMI area will react to the restart. Moreover, to the extent the Commission is supposed to devise techniques to alleviate the stress, it will need to guess at how much benefit will accrue from, say, warning system X as compared to warning system Y.

To attempt to assess the effect of TMI-1's operation on the psychological condition of area residents will, in my view, demonstrate the truth in the Second Circuit's finding that "psychological factors are not readily translatable into concrete measuring rods." [24] I do not believe that Congress intended NEPA to encompass an effect which not only varies from individual to individual, but which is also entirely subjective. All the other federal courts which have considered this issue agree.

The majority obviously recognizes that these NEPA decisions are far more relevant than any others to this case. It attempts to distinguish them, however, by asserting that they deal with "sociologically based community anxieties" and "mere dissatisfactions arising from social opinions, economic concerns, or political disagreements with agency policies," which supposedly are easily distinguishable from the potential "medically-recognized impairment of the psychological health of neighboring residents" of TMI.[25] This purported distinction is destroyed by the majority's own finding that it is a "simple fact that effects on psychological health are effects on the health of human beings." [26] The assertion that mere "anxieties" about nearby matters other than nuclear power are not effects on psychological health is entirely unsupported and, I submit, obviously unsupportable. It is

---

[24] *Hanly* v. *Kleindienst*, 471 F.2d 823, 833 n.10 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973).

[25] Maj. op. at 15, 16.

[26] Id. at 11-12.

a callous assumption indeed to believe that persons living close to a prison or in a high-crime area cannot suffer very real psychological harm from fear of physical violence—and highly illogical, also, since the casualty total from crime is a gruesome, proven fact, while the casualty total from nuclear accidents so far, fortunately, remains at zero.

The majority's decision to ignore these many cases seems based ultimately on nothing more than a *political determination* that fears that federal actions will "change the character of the neighborhood, reduce property values, and increase the dangers of crime" [27] are simply not worthy of consideration. Fears of nuclear power, on the other hand, must be considered, presumably because the majority considers them legitimate. *In each case, however, what we are dealing with are fears and anxieties; if NEPA embraces fears and anxieties in one, it must in all.*

In response, the majority declares that it is not attempting to extend NEPA to "mere anxieties," [28] because this case involves "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." [29] Yet this very passage frames the harm precisely in terms of anxiety and fear. All that it adds are the alleged physical effects accompanying psychological stress. Why physical effects should be determinative of the outcome the majority does not say. If this is critical, then petitioner surely must fail; the physical harms alleged are, standing alone, rather minor. Moreover, I see no basis, as either a legal or scientific matter, for drawing the majority's distinction. I am confident that psychologists would not accept the view that psychological stress unaccompanied by physical symptoms

[27] *Id.* at 5.

[28] *Id.* at 14.

[29] *Id.* at 16-17.

is therefore medically unrecognizable or necessarily much less severe than stress that does have related physical effects.[30]

Moreover, the majority's emphasis on the notion that "post-traumatic" psychological harm is recognized by the medical profession is unconvincing. Surely "post-traumatic" stress is but one of numerous forms of psychological stress that are "medically recognizable." There is no legal or logical justification for interpreting NEPA's "health" coverage to extend only to such stress as may arise from a traumatic event.[31] The majority seems to rely on PANE's allegation of *severe* psychological stress, as well as its own view that this accident was especially "unique and traumatic."[32] But the fact that post-traumatic stress *may* be more severe than other psychological harms is irrelevant to whether psychological harms are cognizable under NEPA. The severity of an effect is relevant to the "significance" it has under NEPA, and thus to whether an EIS must be prepared.[33]

---

[30] I concur in Commissioner Hendrie's analysis:

> Presumably, psychological distress will always be accompanied by physical symptoms in a certain proportion of the persons affected. As a legal matter, I see no basis for differentiating between psychological stress that has physical symptoms and that which is without physical manifestations as a means of deciding whether the Commission's licensing proceedings should adjudicate the nature and degree of such stress.

Metropolitan Edison Co., 12 N.R.C. 607, 617 (1980) (separate views of Commissioner Hendrie).

[31] Presumably, a prison escape in which local citizens were harmed would necessarily constitute a "traumatic event" which would transform local fears from mere anxieties into full-fledged psychological stress that must be considered under NEPA. My suspicion, however, is that the majority would somehow, despite the logic of its opinion, find a way to avoid this result.

[32] Maj. op. at 16.

[33] *See* 40 C.F.R. § 1508.27 (1981).

Before this inquiry need be undertaken, however, there is the preliminary question at issue here: is the alleged effect cognizable *at all* under NEPA as a "primary impact" which may require an EIS? This inquiry does not depend on the intensity of a particular effect.

This point is disputed by the majority: "[T]he severity of a psychological effect is not only relevant to whether an EIS is required under NEPA, . . . but also to the cognizability of the impact under the statute." [34] Why is this so? No answer is given. The majority simply asserts that some psychological effects are worse than others, and therefore the former are cognizable while the latter are not. But this is not true of any other type of health effect, and there is utterly no support in NEPA for this distinction.[35] The majority has simply set itself up as the arbiter of what harms are severe enough to deserve NEPA protection. Thus what constitutes a "real" and "justifiable" fear, as opposed to what constitutes only a "social" or "economic" or "political" fear, will be determined by the courts.

And the choice itself will be totally arbitrary: NEPA protection will depend less on how much psychological harm the individual suffers, than on whether the judges of this court believe the *source* of the psychological harm is acceptable. If one fears living near a prison following a violent escape, NEPA might provide no protection because fear of a public project is merely social; if one fears living near a nuclear power plant following an accident which threatened to cause harm, NEPA will

---

[34] Maj. op. at 17.

[35] For example, no court has suggested that socioeconomic effects may change from secondary impacts into primary impacts if the severity of the effects seems especially severe. Even where an effect of considerable severity was alleged—for example, the loss of 1200 local jobs at a military base—NEPA was not found applicable. *See Image of Greater San Antonio* v. *Brown*, 570 F.2d 517, 522-23 (5th Cir. 1978).

provide protection because, as we all know, nuclear power is potentially dangerous and we should all fear it.

3. *Implications of the majority's reasoning for nuclear power*

The majority's attempt to base its decision on the singularity of the TMI-2 accident, and thus perhaps to avoid the implications of the logic employed, also fails to explain why all nuclear power *licensing* decisions in the future will not need to include consideration of psychological stress. One key factor the majority sees in distinguishing this case from the "sociological anxiety" cases is that none of those cases involved "the holocaust potential of an errant nuclear reactor." [36] But this rationale obviously applies to all nuclear facilities, and licensing is their sine qua non.

More generally, the court's emphasis on the "major" and "unique and traumatic" nature of the TMI-2 accident does not explain why the type of psychological harm resulting from this accident is cognizable under NEPA while other forms of psychological stress associated with nuclear energy might not be. This accident killed no one and caused no detectable physical harm.[37] Thus the

---

[36] Maj. op. at 15. This distinction rests on the unstated premise that a low probability of a high-risk disaster induces greater psychological harm than a high probability of a low-risk disaster. Obviously this is an empirical question, and it seems likely that each individual will have a different reaction. For example, some persons may live near a nuclear reactor without experiencing stress, yet at the same time may be petrified of driving on a crowded freeway. And, of course, the opposite may be true. My colleagues' not-so-subtle attempt to single out nuclear power as particularly likely to cause psychological stress seems based on nothing more than their own personal viewpoints on this issue.

[37] My colleagues describe the accident at TMI-2 as "major," and refer to fears of a *"recurring catastrophe." Id.* at 13, 17 (emphasis added). Others habitually refer to it as a "disaster." This makes one wonder what descriptive phrases will

"unique and traumatic" circumstances must be found elsewhere, perhaps in the fact that the TMI-2 accident "aroused fears of a nuclear core meltdown and led to mass evacuation from the surrounding communities." [38] Both factors might exist, however, even where an accident objectively is not a "major" one at all. Indeed, even in this case it is clear that some of the dangers were greatly exaggerated; most of the evacuation that took place was voluntary rather than officially requested or ordered.[39] To the extent any consistent standard can be

---

be employed *if someone actually loses his life* in a nuclear accident.

A comparison of risks outside the nuclear field may be appropriate here. We have had nuclear power for 30 years, and no one has yet lost his life in a nuclear accident. In recent years *the average loss of life in coal mining*, another source of energy, *has been 150 lives per year*. Wash. Post, 28 Jan. 1982, at A24, col. 1. After every coal mining disaster, the mine usually is shut down for safety inspection and repairs. On the majority's reasoning here, will the Department of Labor's Mine Safety and Health Administration be required to go through NEPA procedures after every mine disaster? What is the state of "psychological health" or "community well-being" in Appalachia after a mine accident? Or indeed, at any time?

For those who are more than just theoretically interested in equalizing the burdens, including the burdens of *risk*, in our society, is it not significant that the risks of mining coal (and the psychological stress and trauma in the surrounding communities) are borne by a group of Americans who could hardly be called privileged, while the risks of nuclear power (so far, non-fatal) are borne equally by rich and poor alike?

[38] Maj. op. at 13-14.

[39] *See* REPORT OF THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND, THE NEED FOR CHANGE: THE LEGACY OF TMI 13-19, 118-30 (1979). To the extent the evacuation was critical in making this a "traumatic" event in the majority's eyes, the result may be to encourage NRC officials during future accidents to play down the need for or even delay evacuation—an anomalous and dangerous result indeed.

derived from the majority's analysis, what appears is *a standard which will depend largely on how much fear is worked up, from whatever source, rather than how serious the danger actually is.*[40]

In any event, the majority fails even to try to explain why fears resulting from lesser accidents, or simply from the operation of nuclear facilities, do not also engender psychological stress in individuals. The susceptibility of individuals to psychological stress may vary widely. There may be a considerable number of persons who suffered more stress from having read about TMI-2's accident than some persons who were in the area at the time. A traumatic event is not a prerequisite to experiencing psychological health problems. And what constitutes a "traumatic" event may differ greatly among individuals. The mere sound of a warning siren at a nuclear plant may cause a great deal of stress to certain individuals, yet the majority apparently would find such stress not cognizable under NEPA because a warning siren is not, in the majority's view, sufficiently "unique or traumatic."

Most fundamentally, the majority never explains why the prerequisite to NEPA consideration of psychological harm is *the existence of some level of stress caused by a nuclear accident.* This is true of no other effect under

---

[40] As Commissioner Hendrie noted, "the actual level of risk is essentially irrelevant to the psychological stress claimed to be suffered." *Metropolitan Edison Co.*, 12 N.R.C. 607, 612 (1980) (separate views of Commissioner Hendrie). Accordingly, "there would seem no obvious basis for differentiating between rationally and irrationally grounded anxieties." *Id.* at 617. I find it hard to believe that Congress intended NEPA to force agencies to consider psychological reactions to risks apart from the actual level of the risks themselves. *Cf. Trinity Episcopal School Corp.* v. *Romney*, 387 F. Supp. 1044, 1079 (S.D.N.Y. 1974) ("though fears may contribute to neighborhood instability, they may be irrelevant to actual facts"), *rev'd and remanded in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

NEPA. Consideration of the potential for harm from exposure to radiation is not postponed until actual exposure takes place; it is the *potential harm* that is to be considered. If, as PANE alleges, the TMI-2 accident caused severe psychological harm, then any nuclear facility has the *potential* for "causing" such harm. NEPA consideration therefore should be mandatory in *all* licensing decisions, if psychological stress is cognizable at all.

This is the result the majority opinion's rationale inexorably demands. If it is a "simple fact that effects on psychological health are effects on the health of human beings," [41] and if such effects are cognizable under NEPA, there is no reason why *only* "post-traumatic" forms of psychological stress must be considered. This logic is obvious enough to opponents of nuclear power that they have responded to this court's 7 January judgment by filing psychological stress contentions in *ordinary NRC licensing and construction permit proceedings.*[42] The breadth of the extension of NEPA that acceptance of these contentions would entail is what obviously leads the majority to take refuge in the "unique and traumatic" nature of the TMI-2 accident and, allegedly, its psychological aftermath. In the end, this attempted limitation is compelling evidence of the majority's own doubts about the validity of its analysis and own realization of how far NEPA is being stretched in order to support today's result.

B. *Need for a Supplemental EIS*

Regulations promulgated by the Council on Environmental Quality (CEQ) require preparation of a supplemental EIS when, inter alia, "[t]here are significant

---

[41] Maj. op. at 11-12.

[42] See pp. 27-29 *infra*. Although it is not clear whether these allegations were raised under NEPA or the AEA or both, after today's decision there will be no doubt that all such challenges will henceforth be framed under NEPA.

new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." [43] A prerequisite to application of this provision, obviously, is the existence of a "proposed action." Taking the broadest conceivable view of this issue, the majority concludes that "the 'continuing activity' of regulating TMI-1 is federal action within the scope of NEPA." [44] This means that the fact that in this case the NRC is proposing to restart the plant is irrelevant. The majority concedes as much, stating that PANE's claim that NEPA must be followed "does not depend on the happenstance that TMI-1 was shut down for refueling at the time of the accident." [45]

This is a holding of considerable breadth. Preparation of an EIS or a supplemental EIS is required only for proposed *actions*. Yet under the majority's interpretation, the NRC is engaged in such "action" every second of every day. It thus will be possible for NEPA to apply even when a nuclear plant is operating pursuant to an NRC license and the NRC proposes to take no action to upset this status quo.

The majority defends its interpretation by pointing to cases which have held that continuing federal involvement in a project meant that NEPA remained applicable, and also to the CEQ definition of "federal action" as "new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies." [46] The majority overlooks, however, the fact that each case it relies on involved a "proposed action": projects had been approved but were as yet not undertaken or were incom-

---

[43] 40 C.F.R. § 1502.9(c)(1)(ii) (1981).

[44] Maj. op. at 20.

[45] *Id.* at 18-19.

[46] 40 C.F.R. § 1508.18(a) (1981); *see* maj. op. at 21-24 (citing cases).

plete.[47] Although in this case the "happenstance" of TMI-1 being shut down does put the Commission in the position of proposing an "action" (restart), the majority's holding may significantly increase the NEPA burden on all regulatory agencies in the future.[48]

---

[47] *See Warm Springs Dam Task Force* v. *Gribble*, 621 F.2d 1017 (9th Cir. 1980) (dam not yet constructed); *WATCH (Waterbury Action to Conserve Our Heritage Inc.)* v. *Harris*, 603 F.2d 310 (2d Cir.) (building demolition not yet carried out), *cert. denied*, 444 U.S. 995 (1979); *Society for Animal Rights, Inc.* v. *Schlesinger*, 512 F.2d 915 (D.C. Cir. 1975) (destruction of birds not yet carried out); *Jones* v. *Lynn*, 477 F.2d 885 (1st Cir. 1973) (urban renewal project not yet completed); *Libby Rod & Gun Club* v. *Poteat*, 457 F. Supp. 1177 (D. Mont. 1978) (dam not yet constructed), *rev'd in part and aff'd in part*, 594 F.2d 742 (9th Cir. 1979); *Nelson* v. *Butz*, 377 F. Supp. 819 (D. Minn. 1974) (dam not yet constructed).

In one other case cited by the majority, the Ninth Circuit reversed a district court holding that the Navy was required to file an EIS annually with each request for appropriations to finance practice bombing of an uninhabited island. *Aluli* v. *Brown*, 437 F. Supp. 602 (D. Hawaii 1977), *rev'd in part*, 602 F.2d 876 (9th Cir. 1979). The Navy had conceded that it should revise its existing EIS due to the discovery of archaeological sites within the target area, but argued that it should wait until it finished an archaeological survey. The precise basis for the need for a supplemental EIS was never made clear, though the court clearly viewed the bombing practice as a series of discrete activities.

[48] Indeed, the combination of the supplemental EIS requirement and the majority's holding here may inhibit agencies ever from making final decisions. Yet the Supreme Court has recently reiterated that agencies may not be forced constantly to grant rehearings simply because new information is available:

> "Administrative consideration of evidence . . . always creates a gap between the time the record is closed and the time the administrative decision is promulgated [and, we might add, the time the decision is judicially reviewed] . . . . If upon the coming down of the order litigants might demand rehearings as a matter of law

In its 7 January judgment, the majority compounded this unnecessarily broad construction of the supplemental EIS requirement by ordering the NRC to conduct an "environmental assessment" and by ordering that the assessment extend to the socioeconomic effects alleged by PANE.[49] Both of these orders were clearly wrong. The majority has not expressly repudiated those portions of the original judgment, but its 2 April amended judgment and its opinion today indicate otherwise. To eliminate any possible uncertainty on the part of the agency, I will briefly discuss these two points.

An environmental assessment is a procedure required by CEQ regulations to be used when an agency must decide whether to prepare an EIS.[50] This requirement does not extend to supplemental EIS's. The majority's first judgment required the NRC to conduct an environmental assessment in this case. Today's opinion, however, leaves this procedural question to the agency: "We remand the record in this case to the Commission to determine what procedures NEPA requires in light of its evaluation of new information about psychological health effects."[51] In other words, the NRC is required to determine whether a supplemental EIS is required, but it is not required to make that determination on the basis of any specific procedure.

---

because some new circumstance has arisen, some new trend has been observed, or some new fact discovered, there would be little hope that the administrative process could ever be consummated in an order that would not be subject to reopening." *ICC* v. *Jersey City*, 322 U.S. 503, 514 (1944).

Vermont Yankee Nuclear Power Corp. v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 554-55 (1978).

[49] *See* 7 January judgment, *reprinted in* note 6 *supra*.

[50] 40 C.F.R. § 1508.9 (1981).

[51] Maj. op. at 19 n.12. *See also* amended judgment, *reprinted in* note 6 *supra*.

This obviously is the correct result. The Supreme Court's decision in *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*[52] makes clear that courts may not impose new procedural requirements on agencies. Moreover, there is no necessary reason why an agency must conduct a formal environmental assessment every time any person alleges that new and significant information requires preparation of a supplemental EIS. This determination may well be different from the determination whether an EIS was required originally, the determination that an environmental assessment is designed to facilitate.[53] Thus, while the agency retains the power to order an environmental assessment if it wants to,[54] neither NEPA nor the CEQ regulations require adherence to this procedure.

The court's 7 January judgment also ordered the NRC to include in the environmental assessment consideration of the socioeconomic effects alleged by petitioner. Today, however, the court withdraws that requirement: "If NEPA requires the Commission to prepare a supplemental EIS regarding the TMI-1 restart decision because the agency makes a threshold finding of significant new information on psychological effects, . . . PANE's contentions regarding secondary effects on the community

---

[52] 435 U.S. 519, 539-49 (1978).

[53] For example, an environmental assessment must include a discussion of both the need for a proposal and alternatives to the proposal. 40 C.F.R. § 1508.9(b) (1981). In the context of this case, where the need for TMI-1 has already been determined and alternatives to TMI-1 have already been considered in the original EIS, such requirements make little sense. These earlier agency determinations have not been called into question by petitioner's new allegations. To hold otherwise would effectively turn the requirement to supplement an EIS into a requirement to prepare an entirely new EIS. This is not the purpose of a supplemental EIS, and in determining the need for one the agency should be able to use whatever procedures it finds appropriate.

[54] *Id.* § 1501.3(b).

must be evaluated in the supplemental EIS."[55] This means that the NRC is not required to hear any evidence or make any findings on the alleged effects of restart on community well-being, *unless* it determines that the psychological health effects of restart are significant enough to warrant preparation of a supplemental EIS.

The majority is correct in drawing back from the requirement in its original judgment. Socioeconomic effects are, as the majority itself has found,[56] only secondary effects which therefore do not themselves require preparation of an EIS. PANE has argued that secondary effects can necessitate a supplemental EIS,[57] but this would lead to the absurd result of a continuing agency requirement to supplement its EIS with consideration of effects that were not significant enough to require preparation of an EIS in the first place. Nothing in NEPA or the CEQ regulations supports such a scheme, whereby a supplemental EIS is more easily triggered than an original EIS, and the majority has rightly rejected it.

C. *The Injunction Against Restart of TMI-1*

On 7 January the majority enjoined restart of TMI-1 until the NRC had completed an enivronmental assessment. This injunction has now been lifted, but only due to independent problems that will delay reopening of the plant. Since the majority has not given any indication that it will hesitate to reimpose the injunction if restart appears possible before completion of the NEPA proceedings, it is worth discussing the problems with the majority's original injunction.

Perhaps the majority found it obvious that restart could not be permitted prior to completion of the NRC's

---

[55] Maj. op. at 18. *See also* amended judgment, *reprinted in* note 6 *supra*.

[56] Maj. op. at 17.

[57] *See* Brief for Petitioner at 51, 58.

NEPA inquiry. It must be remembered, however, that *the majority itself disclaims reliance* on the happenstance that TMI-1 was shut down at the time of the accident. Since a restart decision is normally quite routine, the majority's decision to issue the injunction suggests that it would have felt equally compelled to *shut down* TMI-1, pending the determination on whether to prepare a supplemental EIS, had it been in operation and had the NRC determined not to shut it down.

Viewed in this light, the propriety of issuing an injunction was much in doubt. There is no absolute principle that requires enjoining agency action pending compliance with NEPA. Rather, the court should weigh the equities to determine where the public interest lies:

> [W]hile there is, in cases of NEPA noncompliance, a "presumption" in favor of injunctive relief, such relief does not follow automatically from every finding of a violation of NEPA. . . . What is called for, in each case, is a "particularized analysis" of the violations that have occurred, of the possibilities for relief, and of any countervailing considerations of public interest.[58]

In my view there are several considerations that militated against an injunction in this case. First, it is extremely unlikely that any consideration of psychological stress will result in a permanent closing of TMI-1.[59]

---

[58] *Alaska* v. *Andrus*, 580 F.2d 465, 485 (D.C. Cir.) (Bazelon, J.) (footnote omitted), *vacated in part on other grounds sub nom. Western Oil & Gas Ass'n* v. *Alaska*, 439 U.S. 922 (1978).

[59] Although courts normally should not prejudge whether consideration of environmental factors will affect the agency's decision, *see Realty Income Trust* v. *Eckerd*, 564 F.2d 447, 456-57 (D.C. Cir. 1977), in this case there is ample evidence from the NRC itself that consideration of psychological stress allegations will not lead to the closing of TMI-1. Commissioner Bradford, who exhibited the most sympathy for PANE's allegations, conceded that "it will be hard to

Consideration of measures designed to help reassure the public of the plant's safety, even if required, could be undertaken while the plant was readied for restart. (Again, it must be remembered that the majority's reasoning would apply *even if the plant were operating;* surely it would not make a mockery of the NEPA process were a court to order consideration of certain factors without ordering a shutdown of the plant.) Second, there have been substantial rate increases for the people in the TMI area, both to pay the cost of the TMI-2 cleanup and to cover the costs of obtaining electricity elsewhere. This burden will be prolonged and perhaps increased if TMI-1 remains closed indefinitely. The court should have evaluated these costs.[60]

Third, and most important, the question before the Commission in January was whether to approve *a restart limited to five percent of the plant's power level.* This low-power start was proposed *unanimously* by the Licensing Board, and "would facilitate testing of many nuclear safety devices and systems but would essentially eliminate the possibility of an accident having serious consequences for the public health and safety."[61] Such a

---

avoid the conclusion that stress and its consequences are not of such overriding importance to the populace as a whole as to preclude operation of the plant." *Metropolitan Edison Co.*, 12 N.R.C. 607, 621 (1980) (dissenting views of Commissioner Bradford). The court should have taken notice of this fact in balancing the equities to determine whether to issue an injunction halting the restart; no member of the Commission would have done so.

[60] "The decision whether halting a project pending reevaluation of environmental factors warrants the social and economic costs of delay rests in the sound discretion of the court." *Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, 606 F.2d 1261, 1272 (D.C. Cir. 1979).

[61] *Metropolitan Edison Co.*, Partial Initial Decision, Docket No. 50-289-SP (Restart), at 803 (Atomic Safety and Licensing Board 14 Dec. 1981). The reason for postponing a

short-term, low-power start would assuredly have much less impact on area residents' psychological health than allegedly would a full restart for resumption of normal operations. The majority certainly should have considered this, and might well have ordered only that the Commission postpone decision on a *full* restart until completion of the environmental assessment.

By refusing even to consider these obviously relevant factors, the majority suggests that any time a court decides merely that a supplemental EIS *may* be needed, it necessarily must order that the nuclear plant, or other federal activity, be shut down until the agency has considered the environmental issues. NEPA was not intended to result in such a major interference in already approved and already operating facilities. Since I do not find any violation of NEPA in this case, I had no occasion to balance the equities in determining the need for an injunction. This the majority was required to do. The arguments against the injunction were strong, and the majority's failure to address them was erroneous under any judicial review standard.

D. *Summary*

The fundamental error in the majority's reasoning is its conclusion that allegations of psychological stress, caused by fear of a second nuclear accident, are cognizable under NEPA. The majority's attempt to limit this holding to the "unique and traumatic" TMI situation has no basis in NEPA law. The majority seems to *hope* that psychological stress allegations will rarely be raised, so that the logically necessary extension of today's holding to any kind of psychological harm, whether "post-traumatic" or not, will be avoided.

---

full restart was that the Board had not yet completed an inquiry into allegations of cheating by two TMI-1 supervisors on an NRC examination.

On the basis of all experience, however, one may well doubt whether opponents of nuclear power or other federal activities will so cooperate. Indeed, it appears that this court's 7 January judgment has already been taken as indicating that psychological stress allegations will be fair game in *any* nuclear power proceeding. Despite PANE's and the majority's protestations that a prior nuclear accident is critical to the validity of stress allegations, antinuclear groups have recently filed such allegations in *four licensing and permit proceedings*:

> For example, in the Shearon Harris operating license proceeding, three petitions to intervene were filed on February 17, 1982; all three seeking to raise psychological distress issues. *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), NRC Docket Nos. 50-400, 50-401. In particular, a group known as the Environmental Law Project of the University of North Carolina sought to intervene, claiming that operation of the plant would undermine its members' "psychological well-being"; that its members "must study long and hard to prepare for their classes"; and that "the psychological stress of an operating plant in such close proximity will detract from their studies." Daniel F. Read also sought to intervene, stating that he would like to contest "the psychological stress factor." Similarly, a group called Chapel Hill Anti-Nuclear Effort claims that the plant would "undermine the psychological well-being of petitioner's members."
>
> In the Black Fox construction permit proceeding, the intervenors on February 1, 1982, submitted a contention claiming that the safety evaluation of the plant was deficient because it "did not include the effects of psychological stress on the people within the 10 and 50 mile emergency planning zones." *Public Service Company of Oklahoma* (Black Fox Units 1 and 2), NRC Docket Nos. 50-556, 50-557 (*see* Exhibit B).

In the Zimmer operating license proceeding, after the hearing had been completed, the intervenor indicated that it would attempt to renew a previously rejected psychological stress contention after the Court has issued its opinions in this case. *Cincinnati Gas & Electric Co.* (William H. Zimmer Nuclear Power Station, Unit 1), NRC Docket No. 50-358, Transcript of Hearing, March 4, 1982, at 7933-36 (*see* Exhibit C).

Finally, there is currently in progress a special NRC proceeding to determine whether the operating licenses for the Indian Point nuclear plants should be revoked. *Consolidated Edison Company of New York* (Indian Point Unit 2), NRC Docket No. 50-247-SP; *Power Authority of the State of New York* (Indian Point Unit 3), NRC Docket No. 50-286-SP. On December 8, 1981, a group called Parents Concerned About Indian Point filed proposed contentions in that proceeding, one of which (Contention IV) alleges that "[t]he physical and psychological environment of children will be improved by permanently shutting down the Indian Point Nuclear Power Station." (*See* Exhibit D). The basis for this contention was explained in part as follows:

> Parents, teachers, doctors, and other caretakers of children feel anxiety because of the continued operation of Indian Point. These anxieties are communicated to children and would be significantly reduced by cold shut down of Units 2 and 3.

On April 9, 1982, the Indian Point Licensing Board issued a Memorandum and Order admitting the contention into the proceeding. (*see* Exhibit E, at 14). In a footnote, the Licensing Board made the following reference to this case:

> The litigation of psychological aspects of this contention will be held in abeyance pending issuance of an opinion by the court in PANE v NRC, Docket No. 81-1131, D.C. [Circuit] Court

> of Appeals, and any NRC policies or regulations issued as a result of that decision. We are also holding in abeyance action on the Power Authority's Motion to Exclude Fear of Nuclear Power as an Issue in this Proceeding dated December 1, 1981.[62]

This makes clear that today's decision will not be deemed limited or sui generis, but rather as inviting protests based on psychological stress to be raised in all nuclear proceedings. And under today's reasoning, such a challenge to an operating plant would require the NRC at least to make a threshold determination whether a supplemental EIS must be prepared to take account of these allegations, and the plant would be shut down by court order pending completion of this determination.

Of course, the majority protests that it is not trying to draw a bright line to govern future situations, and perhaps it might decide these new cases differently. *But in doing so it would necessarily repudiate the logic of its opinion today, and thereby expose this decision for what it is*: a decision that NEPA *must* cover the "psychological aftermath" of the TMI-2 accident, not, in the final analysis, because NEPA's history, purpose, and judicial construction demand it, but because the majority finds this "most publicized nuclear accident of our time" to be a terrible thing indeed.[63]

II. Atomic Energy Act

In December 1980 the Commission voted 2-2 to deny consideration of psychological stress allegations in the TMI-1 restart proceeding. In separate opinions Commissioner (then Chairman) Ahearne and Commissioner Hendrie stated that the AEA did not require considera-

---

[62] Intervenor-Respondents' Comments on NRC's Memorandum and Order Concerning the Atomic Energy Act at 4-6 (footnotes omitted).

[63] Maj. op. at 28.

tion of these issues.[64] Commissioner Gilinsky and Commissioner Bradford voted to exercise the NRC's discretion to consider these issues, but did not express a view on whether consideration was mandated.[65] In September 1981 Chairman Palladino was named as the fifth commissioner, and he voted to deny consideration of psychological stress, without stating his reasoning.

On 7 January 1982 this court, Judge Wilkey dissenting, ordered the NRC to "prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.[66] On 30 March 1982 the Commission complied, filing a memorandum and order joined by Chairman Palladino and Commissioners Ahearne and Roberts.[67] Commissioner Gilinsky again stated his view that the NRC should have considered psychological stress issues, and again did not contend that such consideration was mandated by the AEA.[68]

On the basis of the Commission's 30 March opinion, we now uphold its decision.

A. *Standard of Review*

As the Supreme Court has recently reiterated, an agency's interpretation of its governing statute is entitled to substantial deference. "To satisfy this standard it is not necessary for a court to find that the agency's construction was the only reasonable one or even the reading the court would have reached if the question

---

[64] *Metropolitan Edison Co.*, 12 N.R.C. 607, 610 (1981) (separate views of Chairman Ahearne); *id.* at 615 (separate views of Commissioner Hendrie).

[65] *Id.* at 619 (separate views of Commissioner Gilinsky); *id.* at 621 (separate views of Commissioner Bradford).

[66] Judgment, *reprinted in* note 6 *supra*.

[67] *Metropolitan Edison Co.*, Docket No. 50-289 (N.R.C. 30 Mar. 1982) (hereinafter "NRC op.").

[68] *Id.* (separate views of Commissioner Gilinsky).

initially had arisen in a judicial proceeding." [69] Our deferential posture is further buttressed by the recognition that Congress' scheme for regulating nuclear energy "is virtually unique in the degree to which broad responsibility is reposed in the administering agency." [70] We conclude that the Commission's interpretation of the AEA is reasonable and completely consistent with the intent underlying the statute, and we accordingly affirm its decision not to consider psychological stress issues under the AEA.

B. *Meaning of "Health and Safety" in the AEA*

The AEA gives the Commission the responsibility to "protect the health and safety of the public." [71] In determining that this mandate does not include the responsibility to consider psychological reactions to nuclear power, the Commission emphasized that "the Atomic Energy Act itself does not discuss psychological health, and the statute, its legislative history, and applicable caselaw all suggest strongly that Congress intended the Commission to exercise its regulatory authority to protect only against the physical risks associated with radioactivity." [72] In addition, the NRC noted that "there are strong policy considerations which argue against the consideration of psychological health effects *per se* in NRC licensing and enforcement proceedings." [73] Both rationales are reasonable and in accord with the AEA.

The Commission relied substantially, and in our view properly, on the First Circuit's decision in *New Hamp-*

---

[69] *FEC* v. *Democratic Senatorial Campaign Comm.*, 102 S. Ct. 38, 46 (1981).

[70] *Siegel* v. *Atomic Energy Comm'n*, 400 F.2d 778, 783 (D.C. Cir. 1968).

[71] 42 U.S.C. § 2012(d) (1976); *see id.* § 2133(d).

[72] NRC op. at 2.

[73] *Id.*

shire v. *Atomic Energy Commission*,[74] which represents the primary judicial construction of "health and safety" under the AEA. The court was asked to order the Commission to consider in a licensing proceeding "evidence of possible thermal pollution of the Connecticut River as a result of the discharge of cooling water by [the nuclear] facility." [75] Judge Coffin's opinion for the court noted that Congress had nowhere in the statute provided any more precise definition of "health and safety," and that under the modern usage of the phrase, psychological health would be included. But the court observed that it did not "feel that we fulfill our function responsibly by simply referring to the dictionary." [76] Considering the legislative history in detail, Judge Coffin found clear evidence that a broad construction was not intended:

> Here we feel a very palpable restriction in the history surrounding the problem addressed by the Congress, the subsequent Congressional confirmation of the limited approach taken by the Commission, the contemporary efforts in the Congress to broaden that approach, and a recognition of the complexity of administrative arrangements which would attend a literal definition of public health and safety as these terms are used in the Atomic Energy Act.[77]

The court concluded that Congress "had in mind only the special hazards of radioactivity," [78] and that the Commission's responsibility is "confined to scrutiny of and protection against hazards from radiation." [79]

---

[74] 406 F.2d 170 (1st Cir.), *cert. denied*, 395 U.S. 962 (1969).

[75] *Id.* at 171.

[76] *Id.* at 173.

[77] *Id.* at 173-74.

[78] *Id.* at 174.

[79] *Id.* at 175.

Petitioner has failed to demonstrate that this well-reasoned opinion—which, significantly, has now been adopted by the Commission [80]—is an unreasonable or erroneous construction of the Act. Petitioner's primary argument is simply that the "plain meaning" of "health and safety," which arguably includes psychological health, should control. The First Circuit directly considered this suggestion, however, and determined that there were strong indications in the legislative history that this was not the meaning intended by Congress. Both that court and the NRC found that the fundamental conclusion one must reach after considering the legislative history of the 1946 and 1954 acts, along with all the subsequent history of NRC regulation and congressional oversight, is that Congress was concerned about "the danger from explosion, radioactivity, and other harmful or toxic effects incident to the presence of such materials," [81] and

---

[80] *See generally* NRC op. at 4-10.

[81] S. REP. No. 1211, 79th Cong., 2d Sess. 1335 (1946). Petitioner argues that the word "other" in this passage demonstrates that Congress contemplated encompassing all harms not yet known within the meaning of "health." *See* Brief for Petitioner at 31. The context of the list of harms makes clear, however, that Congress was concerned with the physical harms resulting from exposure to radiation, and most certainly not with the psychological harms that may result from being in the vicinity of an operating nuclear facility. As the Commission stated:

> Psychological distress is sufficiently dissimilar to the types of harm enumerated in the statute that it cannot be considered among the 'other harmful or toxic effects', contemplated by Section 12. This is all the more true in view of the total absence of any suggestion in the legislative history or in 35 years of Commission practice and congressional oversight that the Commission was intended to take into account psychological distress alleged to result from its activities.

NRC op. at 13. Thus unlike NEPA, which applies to all agencies and was meant to address a wide variety of potential harms, the AEA was definitely aimed at a particular concern: human exposure to radioactivity. Whatever the

that the Commission was created "in order to bring a maximum of technical expertise to bear on complex and hazardous activities associated with a developing technology." [82] Given this background, limiting "health and safety" to the special hazards of radioactivity is reasonable and, indeed, compelling.

PANE argues, however, that even under the First Circuit's definition psychological stress must be considered. Since there is "a justified public perception of radiation as extremely hazardous," combined with the knowledge that a major accident could contaminate a large area, the psychological stress resulting from the TMI-2 accident and, allegedly, the TMI-1 restart is in fact a "special hazard of radioactivity." [83] We agree with the Commission that this argument is "unpersuasive. Presumably, every hazardous technology gives rise to fears peculiarly associated with it: fear of being inundated by failure of a newly constructed dam, for example, or of being hit by debris from a crashing airplane." [84] Individuals may experience psychological trauma from the occurrence of accidents or disasters such as these, all of which take place with sufficient frequency to claim a substantial number of human lives. It is obvious, therefore, that "post-traumatic psychological stress" can result from any traumatic event, and is not so peculiar to nuclear energy that Congress can be deemed to have considered it a *special* hazard of radioactivity. Rather, the special hazards Congress was concerned with were those associated with human exposure to radiation.

---

complexities in determining the applicability of NEPA to psychological harms from nuclear power, therefore, the proper disposition on the AEA issue is clear.

[82] NRC op. at 3 (quoting *Metropolitan Edison Co.*, 12 N.R.C. 607, 613 (1980) (separate views of Commissioner Hendrie)).

[83] Brief for Petitioner at 21-22.

[84] NRC op. at 10.

Moreover, if, as PANE argues, there is an extreme fear of radiation and of a major nuclear accident, then certainly there must be individuals who experience medically-diagnosable stress resulting from the operation of any nuclear facility. Since this undeniably is an effect on psychological health, it would need to be considered in every licensing proceeding. Yet PANE itself recognizes that this is contrary to congressional intent:

> It might well be an absurd result to hold that the Commission is required to take into account, as within Section 103(d), the fears that normally arise in a community when a nuclear reactor is proposed. That type of interpretation could conceivably prohibit nuclear reactors virtually anywhere, which is clearly not the intent of Congress.[85]

This attempt to limit the argument is plainly illogical. If someone alleges harm to his psychological health from the operation of a nuclear plant, and if "health and safety" encompasses psychological harms, why should not the NRC be required at least to consider this allegation in its licensing decision? It may be likely that the

---

[85] Brief for Petitioner at 25-26. PANE may concede the absurdity of this interpretation, but many other antinuclear groups have unabashedly pushed for its adoption. In the past six months, and in particular since this court's 7 January 1982 judgment, psychological stress contentions have been raised in four separate proceedings: two operating license proceedings, a construction permit proceeding, and a special license revocation proceeding. *See Carolina Power & Light Co.*, NRC Docket Nos. 50-400, 50-401 (contentions raised 17 Feb. 1982); *Cincinnati Gas & Elec. Co.*, NRC Docket No. 50-358 (previously rejected contention raised again 4 Mar. 1982); *Public Serv. Co. of Oklahoma*, NRC Docket Nos. 50-556, 50-557 (contention raised 1 Feb. 1982); *Consolidated Edison Co. of New York* and *Power Auth. of State of New York*, NRC Docket Nos. 50-247-SP, 50-286-SP (contention raised 8 Dec. 1981). In each instance, the contention is that the NRC must consider the psychological stress resulting from the mere existence of a nearby operating nuclear plant.

stress alleged in the aftermath of the TMI-2 accident will be greater than the stress alleged generally, but PANE would be hard-pressed indeed to provide any justification for interpreting the "plain meaning" of "health and safety" to include "post-traumatic psychological stress" but not other kinds of psychological stress. As the Commission stated, "we cannot believe that [Congress] meant that "health" under the Atomic Energy Act, should clearly encompass the psychological well-being of persons fearful of a second nuclear accident in their vicinity, while equally clearly excluding the mental health of persons who fear that their locality may experience its first nuclear accident." [86]

It was also reasonable for the Commission to note that "the major contribution which it can make to the alleviation of psychological stress is to make sound technical decisions in its areas of expertise." [87] If the AEA were read to require NRC attention to psychological reactions to nuclear power, the result might be a substantial shift in the agency's allocation of resources away from its chief responsibility of ensuring the technical safety of operative reactors. Since the NRC does not have expertise on mental distress, the result inevitably would be a reduced ability to attend to the safety issues at hand.[88]

In sum, petitioner cannot justify its position by offering any reasoned interpretation of the statute which will apply generally in the future. There simply is no basis for this court to overrule the agency's interpretation. The AEA does not require consideration of psychological

---

[86] NRC op. at 20.

[87] *Id.* at 11.

[88] "A technical agency cannot and should not be expected to devote its resources to developing expertise in the categories and subcategories of psychological stress alleged to be peculiar to the particular technology which that agency regulates." *Id.* at 17.

stress allegedly resulting from fear of a nuclear accident, regardless whether an accident has previously occurred in the vicinity.

III. Conclusion

The majority has erred in its construction of NEPA. I have given detailed attention above to the many problems with the majority's analysis, but I also think it worthwhile to point out the flawed premises that seem to underlie the decision. The majority sums up its treatment of the NEPA issues by declaring:

> In the wake of the most publicized nuclear accident of our time, the people of the Three Mile Island area—and the people of the nation as a whole—are entitled to the protections Congress provided in the National Environmental Policy Act. The government must not proceed to make decisions that might have a momentous effect on the psychological health and community well-being of its citizens without first giving careful, responsible consideration to the consequences its actions might have. By enacting NEPA Congress meant to assure that no federal decision—especially one of this importance—would be made in the shadow of environmental ignorance.[89]

The points the majority deems worthy of great emphasis—that this was "the most publicized nuclear accident of our time," that "the people of the nation as a whole" are somehow and for some reason entitled to NEPA consideration in this case, and that NEPA was meant to apply "especially" to decisions "of this importance"—are revealing.

They suggest a fundamental finding that the TMI-2 accident must not be allowed to pass without requiring the NRC to ask whether nuclear power, at least at this one site, should be allowed to *continue at all.* Whether to continue at all is a finding beyond the power of any

---

[89] Maj. op. at 28.

agency—or any court. Congress, wisely or unwisely, has made the decision that this country will develop nuclear power.[90] No court has the power to rewrite NEPA to impose additional conditions, certain to produce long delays and perhaps ultimately impossible to fulfill. Congress knows everything that this court knows—and more—about the accident at TMI-2. When the standards by which the agency is to act under either NEPA or AEA are to be changed, Congress will determine in what direction and degree.

At the heart of the majority view is a belief that nuclear power and its attendant risks must be judged under some special standard. I submit that this represents a blindness toward the larger picture. Energy production of any sort is risky. Coal is a primary alternative to nuclear power. Yet 150 coal miners die each year, and many more contract debilitating diseases.[91] As the reliance on coal increases—as when a court prevents a licensed nuclear plant from reopening—these risks increase. And, most important, these risks fall almost exclusively on one group of society, human beings not among the more privileged in our America. The risks of nuclear power, in contrast, fall upon rich and poor alike. Yet the majority expresses apparent indignation at the thought that "the people of the Three Mile Island area . . . and the people of the nation as a whole" might be deprived of a chance to argue that the psychological strain of living with the risk of nuclear power is too great to permit TMI-1 to operate. Apparently the risk should remain where it traditionally has fallen, on those who produce the energy rather than on those who use it.

This special fear of nuclear power ultimately serves to institutionalize a fear of taking risks at all. It would

---

[90] This is a decision paralleled in every other country with access to the technology and the money to pay for it.

[91] *See* note 37 *supra*.

seem to me quite logical to attempt to treat the stress resulting from the TMI-2 accident and to take all necessary steps to minimize the possibility of an accident that might cause similar stress in the future. But petitioners instead have insisted, and the majority has agreed, on a quite different and ultimately far-reaching orientation: when the problem is psychological stress, the solution is not to help individuals overcome their fears, but to determine whether the feared activity should be abandoned.

We have thus come a long way in fifty years, from a time when the President of the United States was widely and enthusiastically applauded for declaring: "The only thing we have to fear is fear itself." Now the fear itself necessitates an environmental assessment. All risky activity must grind to a halt in the interim. Inaction has become epidemic, and delay is maximized. I do not believe the Congress intended NEPA to constrain federal action on these psychological and emotional bases. Accordingly, I respectfully dissent.

WRIGHT, *Circuit Judge, dissenting on the Atomic Energy Act issue*: The Nuclear Regulatory Commission has abdicated a significant part of its statutory responsibility to protect the health and safety of the American people. It has taken the position that, even though the Atomic Energy Act prohibits the grant of a license if the public health will be endangered, licensing proceedings may ignore potential effects on psychological health.[1] Today the court, giving undue deference to the agency's views, endorses this erroneous interpretation of the statute. I therefore dissent.

In my view, the plain meaning of the statute compels the Commission to consider psychological health contentions in licensing proceedings. The Commission may not grant a license if, in its opinion, "the issuance of a license to [the applicant] would be inimical to • • • the health and safety of the public." 42 U.S.C. § 2133(d) (1976). Not all fears and worries, of course, are psychological health effects within the definitions of medical science. The adverse psychological impact of restarting TMI-1 may or may not rise to the level of a health problem; even if it does, the same might not be true of the fears and anxieties of neighbors of other power plants. Drawing these lines, on the basis of the facts, is the task of the Commission. If operation of a nuclear facility would be inimical to the psychological health of the public, the Commission must not approve operation. On the other hand, if investigation shows that allegations of psychological health effects are unfounded or that the effects are *de minimis*, the Act does not prohibit grant of a license. In short, the statute requires the Commission to make its decisions in light of full information.

---

[1] The present appeal arises out of the Commission's proceedings on whether to restart Three Mile Island Unit 1 (TMI-1), but the Commission's interpretation of the Atomic Energy Act applies to licensing proceedings as well.

Unfortunately, the Commission's position short-circuits this process of scientific assessment and informed decisionmaking. The court affirms the Commission, taking a "deferential posture" and asserting that "[t]here simply is no basis for this court to overrule the agency's interpretation." Wilkey opinion (AEA) at 31, 36. I respectfully submit that this is a case in which such deference is inappropriate. As the Supreme Court recently reiterated,

> The interpretation put on the statute by the agency charged with administering it is entitled to deference, * * * but the courts are the final authorities on issues of statutory construction. They must reject administrative constructions of the statute, whether reached by adjudication or by rulemaking, that are inconsistent with the statutory mandate or that frustrate the policy that Congress sought to implement. * * *

FEC v. Democratic Senatorial Campaign Committee, —— U.S. ——, ——, 50 U.S.L.W. 4001, 4002 (November 10, 1981). In my view, the legislative background shows that the Commission's constricted interpretation of "health" must be rejected.

Congress did not restrict the Commission's mandate to "physical health" or to "special hazards of radioactivity."[2] Instead it used the broad, open-ended term "health" in the Atomic Energy Act. Aware that relatively little was known about the health dangers of atomic energy at the time the Act was passed in 1946 and revised in 1954, Congress acted wisely for the future. The language of the statute goes beyond the specific health hazards then known to the scientific community. It assures that the statute will continue to

[2] This test was adopted by the First Circuit in *New Hampshire v. Atomic Energy Comm'n*, 406 F.2d 170 (1st Cir.), *cert. denied*, 395 U.S. 962 (1969). The Commission relies heavily on the court's analysis of legislative history.

provide full protection to the public as knowledge about the potential health effects of atomic energy expands.

In 1946, for example, many of the long-term health effects of large-scale radiation exposure were as yet unknown. Studies of the survivors of Hiroshima and Nagasaki, which began to be published in the mid-1950's and which continue to the present day, have provided the largest set of data on the effects of ionizing radiation on production of leukemia, other cancers, and genetic effects in human beings. *See* MEDICAL RESEARCH COUNCIL, THE HAZARDS TO MAN OF NUCLEAR AND ALLIED RADIATIONS (1956), *reprinted in The Nature of Radioactive Fallout and Its Effects on Man, Hearings Before the Special Committee on Radiation of the Joint Committee on Atomic Energy*, 85th Cong., 1st Sess. 1539, 1554, 1562, 1581, 1624-1626 (1957); CASARETT & DOULL'S TOXICOLOGY 511 (J. Doull, C. Klaassen & M. Amdur eds., 2d ed. 1980). Yet it would be absurd to suggest that leukemia and genetic defects fall outside the scope of the Atomic Energy Act. Similarly, even though Congress did not refer explicitly to psychological health and even though Three Mile Island has given the scientific community its first opportunity to study the possible psychological health effects of a nuclear power plant accident, the Atomic Energy Act requires the Commission to consider these effects.

The Atomic Energy Act of 1946 created the Atomic Energy Commission, predecessor of the Nuclear Regulatory Commission, and entrusted it with broad responsibility for protecting the public health and safety. The statute reflects Congress' acute awareness that nuclear energy could be extremely dangerous, and that scientific knowledge of the potential hazards was completely inadequate. Congress established an absolute government monopoly over production of fissionable material, recognizing that this activity was "attended by serious hazards to public health and safety" and that the responsi-

bility for minimizing these hazards is "clearly a governmental function." S. Rep. No. 79-1211, 79th Cong., 2d Sess., *reprinted in* [1946] U.S. Code Cong. Serv. 1327, 1330. It also imposed strict controls over licensing of devices utilizing atomic energy, because it believed that such devices, "if widely used, would so multiply potential hazards to national health and safety that even careful Government regulation would fail to provide adequate safeguards." *Id.* at 1333. At the same time Congress realized that the scope and extent of potential hazards were unknown. Recognizing the imperative need for "an ever-expanding fund of theoretical and practical knowledge," the bill encouraged both government and private research in several fields, including "protection of health during research and production activities." *Id.* at 1330; H.R. Rep. No. 79-2478, 79th Cong., 2d Sess. 8 (1946).

Given this context of acknowledged uncertainty, the Commission is simply wrong when it asserts that the 1946 Act limited health hazards to nonpsychological "special hazards of radioactivity." Brief for respondents at 31. Neither the statute nor the legislative history gives any indication that Congress rejected the ordinary meaning of the word "health"—psychological as well as physical health. The Act gave the Commission authority to establish regulations that it might deem "necessary or desirable to protect health or to minimize danger from explosions and other hazards to life or property." Atomic Energy Act of 1946, Pub. L. No. 79-724, § 12(a)(2), 60 STAT. 755, 770. The Senate report paraphrased the language of the statute: regulations were "to minimize the danger from explosion, radioactivity, and other harmful or toxic effects incident to the presence of such materials." [1946] U.S. Code Cong. Serv., *supra*, at 1335. Thus, as new types of health hazards were scientifically established, the range of Commission regulation would expand.

In 1954 Congress amended the Atomic Energy Act to establish a role for private industry in the development

of atomic energy. The Commission was authorized to grant licenses to private enterprises to operate nuclear facilities. Comparing the situation in 1954 with that in 1946, the House and Senate committees optimistically reported, "It is now evident that greater private participation in power development need not bring with it attendant hazards to the health and safety of the American people." S. Rep. No. 83-1699, 83d Cong., 2d Sess. 3 (1954); H.R. Rep. No. 83-2181, 83d Cong., 2d Sess. 3 (1954). This reassuring statement must be read in conjunction with Section 103 of the 1954 Act, which imposed a heavy responsibility on the Commission: no license could lawfully be issued "if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public." Pub. L. No. 83-703, § 103, 68 STAT. 919, *codified at* 42 U.S.C. § 2133(d) (1976). The 1954 Act may have been adopted to promote development of nuclear energy, but it did not authorize the Commission to proceed at the expense of health and safety. *Id.* §§ 2(a), (b), (d), (e), 3(d). Again the statute did not define or limit the term "health" in any manner.

The 1946 and 1954 Acts established the Commission's mandate to protect health in plain language which encompasses psychological health. No subsequent action by Congress has limited the scope of the Commission's responsibilities. The Commission quotes from a 1957 study report by the staff of the Joint Committee on Atomic Energy, Statement of Reasons at 8-9, but the quoted language does not support the Commission's position. Even if hazards created by potentially harmful radiation are "[t]he special problem of safety in the atomic field," it does not follow that they are the *only* problem of health and safety that the Commission must take into account. In addition, the Commission rests on the legislative history of amendments to the Atomic Energy Act adopted in 1956 and 1965. *Id.* at 9-10. But neither

amending statute dealt with the Commission's licensing responsibilities over nuclear power plants. Tangential, imprecise descriptions of the Commission's health responsibilities are entitled to no weight.

In short, the Commission has failed to offer any convincing evidence that the Atomic Energy Act excludes mandatory consideration of one of the important components of health—psychological health. An examination of the original sources shows that the Commission lifts scattered passages out of context from committee studies and committee reports. Given the plain meaning of the statutory language, I cannot agree that the Commission's resulting interpretation of the Act is within the bounds of reasonableness.

As a fallback position the Commission urges that, even if psychological health is "health" under the Atomic Energy Act, consideration of psychological health is purely discretionary. This contention is without merit. The Act unequivocally bans issuance of a license to any facility whose operation would be inimical to the public health and safety. The Commission has broad procedural discretion, but it may not avoid its substantive responsibilities by pleading lack of expertise or by pointing to the difficulty of the task. If the Commission is not currently equipped to assess psychological health effects, it must add qualified experts to its staff to fulfill its statutory duties. No other government agency, state or federal, has the power to grant or deny nuclear power plant licenses; therefore it is disingenuous for the Commission to defer to "agencies with expertise in the area of mental health." Statement of Reasons at 17. In addition, the Commission exaggerates the problem of quantification. Its own Atomic Safety and Licensing Board concluded that, at least for purposes of NEPA, "psychological stress is sufficiently quantifiable." 11 NRC 297, 301 (1980), Joint Appendix at 67.

The importance of today's interpretation of the Atomic Energy Act should not be underestimated. Bearing the imprimatur of this court, it will be applied not only in the TMI-1 restart proceeding but in all future Commission licensing proceedings.[3] It permits the Commission to license a nuclear plant even if studies have shown beyond the shadow of a doubt that its operation would seriously damage the psychological health of large numbers of Americans. This result is inconsistent with the plain language and ordinary meaning of the Atomic Energy Act. I respectfully dissent.

---

[3] In the narrow circumstances of the present case, which addressed only the scope of the Commission's investigation, the court's holding under NEPA has given PANE the relief it seeks. Indeed, for this reason I am not convinced that it was necessary for the court to reach the Atomic Energy Act question.

CLI-80-39

Cite as 12 NRC 607 (1980)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-289
(Restart)

In the matter of

METROPOLITAN EDISON COMPANY, *et al.*
(Three Mile Island Nuclear Station, Unit 1)

COMMISSIONERS:

JOHN F. AHEARNE, Chairman
VICTOR GILINSKY
JOSEPH M. HENDRIE
PETER A. BRADFORD

December 5, 1980

Finding itself to be evenly divided on the certified question from the Licensing Board of whether contentions based on psychological stress should be accepted in the TMI-1 restart proceeding, the Commission announces that (1) it will reconsider the question upon appointment and confirmation of a fifth Commissioner; and (2) in the meantime, requests to admit contentions based on psychological stress are effectively denied.

MEMORANDUM AND ORDER

The Commission's Order and Notice of Hearings dated August 9, 1979 stated that the Commission had not determined whether psychological stress could be legally relevant to the TMI-1 restart proceeding. The Commission directed that parties wishing to raise psychological stress or related subjects

before the Board should brief the Atomic Energy Act and National Environmental Policy Act (NEPA) issues relevant to the acceptability of such contentions and that the Board should then certify these issues to the Commission for final decision.

Pursuant to this order the Board on February 22, 1980 certified to the Commission the issue whether psychological stress can be legally relevant to the TMI-1 restart proceeding. In its certification the Board stated that "psychological stress is probably not cognizable under the Atomic Energy Act but . . . the Commission might conclude to the contrary." However the Board also stated its view that psychological stress is cognizable under NEPA, and recommended that the Commission permit the Board to consider psychological stress with the aim of mitigating community fears about the operation of TMI-1.

After reviewing the Board's certification and the briefs filed by the parties, the Commissioners are evenly divided on the question whether the Board should consider psychological stress. Separate views of the Commissioners are attached to this order. A vote of 2-2 on this question constitutes an effective denial of requests to admit contentions based on psychological stress. Therefore, the Licensing Board should consider this to be a denial of these contentions. Further, the Commission decided that it will reconsider and vote on the question when the makeup of the Commission is altered by the appointment and confirmation of a fifth Commissioner. In the meantime, there is no authorization for the Board to admit psychological stress contentions.

It is so ORDERED.

For the Commission

Samuel J. Chilk
SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, DC,
this 5th day of December 1980.

CHAIRMAN AHEARNE'S SEPARATE VIEWS

The Licensing Board concluded: "The Nuclear Regulatory Commission, within its discretion, may and should consider psychological stress and community fears under NEPA for the purposes of mitigating the effects of its TMI-1 licensing activities."[1]

I agree that the NRC should consider psychological stress and community fears—but not in the way the Board intended.

As has been evident throughout the past 15 months, the NRC *is* aware of the psychological stress in the communities surrounding TMI. We have gone through careful and extensive processes to insure that the public health and safety is protected and, to the best of some of our abilities, that we explain each step we are proposing or approving.

However, as was apparent in our treatment of the venting issue, an NRC licensing action is not an appropriate forum for psychological stress issues. There may be adjudicatory bodies which are appropriate for such issues—the NRC is not one.

The Board concludes that ". . . NEPA permits the NRC within its discretion and *without an EIS*, to consider community and individual fears, and to take reasonable actions to mitigate these fears."[2]

The Board has, I believe, correctly identified the most reasonable such action:[3]

> "Certainly it is true that the best way to minimize any psychological stress in the communities around TMI-1 is to make the plant safe or not allow it to operate."

This, of course, is also what the Board (and the Commission) explicitly is charged with doing. In addition, I certainly en-

---

[1] *Metropolitan Edison Company* (Three Mile Island Nuclear Station, Unit 1), LBP-80-8, 11 NRC 297, 309 (1980).

[2] *Id.* at 306.

[3] *Id.* at 308.

dorse the desirability of disseminating accurate information and, to the extent the NRC can assist, in assuring such information is "trusted."[4]

Finally, in terms of the specific legal argument, I agree with the Licensing Board that "psychological stress is probably not cognizable under the Atomic Energy Act,"[5] and I believe that the issue of whether NEPA provides sufficient authority to impose mitigation measures on the licensee in the context of the restart proceeding is problematical.

Consequently, I agree with the Licensing Board that we are not *required* to consider psychological stress. I agree that the best way to decrease such stress is to insure the plant is safe if it is approved for operation. I believe the NRC (Commission and staff) must insure clear and accurate information is provided regarding what is being done. And I believe the Licensing Board and the Commission should play their proper roles in assuring that safe operation be the appropriate requirement.

I do not agree with the separate views of Commissioners Gilinsky and Bradford. Basically I believe their analyses present the issues as being much simpler than they really are.

For example, in commenting on the approach I have advocated Commissioner Gilinsky states: "Ironically, in its only ruling to date on safety issues in this case, the Commission took the narrowest possible view of its safety responsibilities to preserve the discredited assumptions of the hydrogen control rule." The Commission's "view of its safety responsibilities" is more complicated than one would be led to believe from reading Commissioner Gilinksy's comment. The Commission has made no final decision concerning the issues related to hydrogen control. It has already taken some actions and is actively considering additional steps.

---

[4] *Id.* at 299.

[5] *Id.* at 299.

Similarly, an example of Commissioner Bradford's failure to address the complexities inherent in this issue is his assertion that "The Commission has the authority, at least under NEPA, to consider psychological factors and to take actions necessary to mitigate them." To support his proposition Commissioner Bradford cites a case in which the Commission was found to have jurisdiction to mitigate the environmental impacts of transmission lines.[6] While this case may have some relevance, it is hardly conclusive.

Although I have additional disagreements with the views of Commissioners Gilinsky and Bradford, including disagreements with views which the reader of Commissioner Bradford's opinion might believe belong to those who disagree with Commissioner Bradford, e.g., to me, past experience shows that reasoned arguments are of little interest to those whose minds are made up.

---

[6] Although the Court described the Licensing Board decision (which was based in part on visual impacts of the transmission lines and in part on the more traditional consideration of impact on waterfowl) in the "Background" discussion, it did not focus on the need for or propriety of considering various types of impacts. There was no reason for it to address the question since petitioners had conceded the proposed routes were superior. *Public Service Company of New Hampshire* v. *NRC*, 582 F.2d 77, 85 n. 15 (1st Cir. 1978).

SEPARATE VIEWS OF COMMISSIONER HENDRIE

The Atomic Safety and Licensing Board conducting the proceeding on the proposed restart of Three Mile Island Unit 1 has certified to the Commission, by decision of February 22, 1980, the question whether the effect of psychological stress on residents of the TMI area is an issue within the scope of the proceeding. The Licensing Board expressed the view that psychological stress is "probably not cognizable under the Atomic Energy Act," but the Commission, as an exercise of discretion, "may and should consider psychological stress and community fears under NEPA."

For the reasons set forth below, I believe that "psychological stress and community fears" need not and should not be included within the scope of this proceeding. It should be recognized that we are dealing in this case with a situation in which the actual level of risk is essentially irrelevant to the psychological stress claimed to be suffered. Moreover, the psychological stress at issue is not that associated with actual exposure to radiation—although individual petitioners may have been so exposed—but the stress caused by the possibility that they and others might be so exposed by future operation. There is no way to allay that fear except not to build or operate the reactor. That is not to say that these are unimportant matters—on the contrary, they have been and must continue to be of concern to the Commission and to other relevant federal and state authorities. It does not automatically follow, however, that because these concerns are important, the most appropriate way for the Commission to take account of them is to adjudicate, in formal proceedings, the precise nature and degree of fears related to the restart of TMI-1. As I view the mandate of this Commission under the law, it is to permit the operation of licensed facilities upon a finding that they are safe; petitioners would have us consider whether the existence of psychological stress in the community should lead us to deny permission to operate the reactor regardless of our judgment that the plant is safe from a technical standpoint, a decision which would be contrary to the mandate of the statute. Accordingly, I do not

believe that consideration of psychological impacts in the adjudicatory proceeding on the restart of TMI Unit 1 would serve a useful public purpose. Rather, the most appropriate way for the Commission to take account of fears related to TMI-1 is, first, to assure that the technical decision on restart is sound; and second, if the decision is to permit restart, to make sure that the public understands, through accurate and comprehensible information, fully disseminated, the basis for the Commission's determination that the plant can operate safely.

I. Health and Safety Under the Atomic Energy Act

The first question in this case is whether, as intervenor PANE asserts, the Commission is required by the Atomic Energy Act to consider the issue of psychological stress in this licensing proceeding. PANE's argument is based upon a broad reading of the words "public health and safety" in the statute. Read literally, the words are sufficiently broad to allow consideration of mental health under the rubric of "public health." This is hardly surprising. However, the question whether the Commission's responsibility to protect "public health and safety" encompasses mental health problems caused by fear of radiation cannot be resolved by recourse to the text of the Act alone. Neither the Act nor its legislative history makes specific reference to psychological disorders, or psychologically based physical illnesses, related to fear of radiation. We must therefore ask whether it is likely that Congress mandated that the Commission must take such mental health impacts into account in deciding whether a particular nuclear power plant can operate with reasonable assurance of public health and safety.

The Congress which passed the Atomic Energy Act of 1946 created the Atomic Energy Commission in order to bring a maximum of technical expertise to bear on complex and hazardous activities associated with a developing technology. When the Atomic Energy Act of 1954 authorized the development of a civilian nuclear power industry, it was understood from the first that the public might well be apprehensive about a tech-

nology associated in the minds of most with the destructive power of atomic weapons. One of the major reasons for providing for public hearings on nuclear power plants was to provide a means for educating the public about nuclear energy and the measures taken to assure its safety. The 1965 report to the AEC by its Regulatory Review Panel, for example, characterized the most significant functions of public hearings as including a demonstration that "the AEC has been diligent in protecting the public interest" and that the applicant's proposal had received a "thorough and competent review." Congress implicitly acknowledged that public fears about nuclear reactors were a reality which had to be addressed; the means chosen by Congress was to have technical issues of nuclear safety addressed and resolved by technical experts in a public licensing review process administered by the Atomic Energy Commission. Thus, it is not only that there is no suggestion in the Act, its legislative history, or more than a quarter century of Congressional oversight that the Commission's decisions in licensing proceedings were intended to encompass psychological stress associated with particular licensing actions, it is also that Congress envisioned that the Commission's expert judgments, publicly arrived at, would help serve to prevent or allay public fears.

In approaching this issue, moreover, we do not deal with an altogether blank slate. It is useful—though in my view not necessarily dispositive of this case—to consider how the definition of "public health," as the term is used in the Atomic Energy Act, was addressed by the First Circuit Court of Appeals in *New Hampshire* v. *Atomic Energy Commission*, 406 F.2d 170 (1969). In that case, the State of New Hampshire contended that the AEC was obligated to consider the effects of discharges of hot water into the Connecticut River. The State reasoned that the discharges reduced the capacity of the river to assimilate waste and thereby impinged on the public health.

The First Circuit's thorough and scholarly exposition of the text of the statute and its legislative history led it to the

conclusion that New Hampshire's contention was in error. It first considered the State's plea that the issue be resolved on the "present day plain meaning" of the terms "health" and "safety." Though the court found this approach "tempting," it was constrained to observe that "we do not presently feel that we fulfill our function responsibly by simply referring to the dictionary." 406 F.2d 170, 173. The Court explained:

> Here we feel a very palpable restriction in this history surrounding the problem addressed by the Congress, the subsequent Congressional confirmation of the limited approach taken by the Commission . . . and a recognition of the complexity of administrative arrangements which would attend a literal definition of public health and safety as these terms are used in the Atomic Energy Act.
>
> The history of the 1954 legislation reveals that the Congress, in thinking of the public's health and safety, had in mind only the special hazards of radioactivity. . . . The Joint Committee, in its first study report, made its focus clear when it said, "The special problem of safety in the atomic field is the consequence of the hazards, created by potentially harmful radiations attendant upon atomic energy operations." 406 F.2d 170, 173-4.

The court observed that the legislative history of the 1954 Act was of little use in finding a definition of "health and safety," for it was "obvious" that the meaning of terms had been deemed settled at the time the 1946 Act was passed. 406 F.2d 170, 174 n.4. The court then traced the interpretations of "health and safety" applied by the Commission and the Joint Committee on Atomic Energy in subsequent years. In 1965, for example, in enacting amendments to the Atomic Energy Act, the Joint Committee's report on the legislation stated that the "AEC's regulatory control was limited to considerations involving the common defense and security and the protection of the health and safety of the public with respect to the special hazards associated with the operation of nuclear facilities." 406 F.2d 170, 175, quoting S. Rep. No. 390, 89th Cong., 1st Sess., p. 4 (1965).

The present case in many ways parallels the issue in *New Hampshire* v. *AEC*. There as here, the contention was made that the Commission need go no further than its dictionary; "health" includes "mental health," it is now argued, and psychological stress must therefore be evaluated. There as here, the contention was made that allegations of effects on health must be considered by the agency, so long as a causal chain can be hypothesized which has its origin in the operation of the reactor. But as the court in *New Hampshire* recognized, it is necessary to go beyond both dictionary definitions and hypothesized causal chains to consider the Congressional purpose underlying the Act, and the context in which it was passed. The crucial question must be whether Congress intended to require the Commission to consider a particular kind of effect in licensing nuclear power plants. As I have indicated, I find not a shred of evidence to suggest that Congress mandated the Commission to consider psychological stress in its licensing proceedings.

Furthermore, we must not lose sight of the reality—seemingly self-evident—that technical agencies are created by the Congress to perform specific tasks within a certain area of expertise. This agency's expertise includes radiological health and safety and environmental effects related to nuclear power plant construction and operation; it does not include psychological stress. Given that resources are finite, the Commission could not develop expertise in the area of psychological stress without a significant reallocation of resources. I cannot believe that the Congress, in passing the Atomic Energy Act, intended that the Commission should divert resources from its real task—that of protecting public health and safety from radiological hazards posed by nuclear power plants—and reassigning them to the chimerical task of evaluating public anxieties.

The public would indeed have grounds for concern if members of this agency's staff, instead of working to reduce the likelihood of radiological harm to the public, were assigned instead to analyze the degree to which citizens worried about

such harm. It should be obvious that an unsafe plant is not made safe by the fact that local citizens are unconcerned about it, any more than a safe plant is made unsafe by the fact that local residents are deeply anxious about it. The point, again, is not that public concerns should be ignored, but rather that the best way to address those concerns in this case is for the agency to do its statutorily mandated job of protecting the public's physical health and safety and to publicize effectively its conclusions and the facts which underlie those conclusions.

II. Evaluation of Costs and Benefits Under NEPA

The assertion is made that the Commission, apart from its responsibilities under the Atomic Energy Act, is obligated under the National Environmental Policy Act (NEPA) to consider stress occasioned by fear of the operation of TMI-1. I believe that the Commission has the discretionary authority to consider such effects, but that the present circumstances do not warrant such consideration in this case.

First, the Commission prepared an environmental impact statement on the operation of TMI-1 before the facility was ever allowed to operate. After the accident at TMI-2, the Commission ordered the licensee to take a variety of safety-enhancing measures as a condition for resuming operation of TMI-1. None of those measures has a significant impact on the environment, and there is therefore no "major federal action significantly affecting the quality of the human environment" that requires preparation of an environmental impact statement as a matter of law.

Even if an environmental impact statement were required, however, applicable case law indicates that most courts consider psychological impact to be too intangible and unquantifiable to require analysis under NEPA. The cases are well known. In *Hanly* v. *Kleindienst* (Hanly II), 471 F.2d 823 (1972), *cert. denied*, 412 U.S. 908 (1973), the Second Circuit Court of Appeals stated that it was "doubtful whether psychological and sociological effects upon neighbors constitutes the type of factors that may be considered in making such a

determination [i.e., whether an impact statement is required] since they do not lend themselves to measurement." The D.C. Circuit Court of Appeals quoted *Hanly II* with approval in commenting with respect to "some questions of esthetics" that "like psychological factors they 'are not readily translatable into concrete measuring rods.' " *Maryland-National Capital Park and Planning Commission* v. *U.S. Postal Service*, 487 F.2d 1029 (1975). The Sixth Circuit *[sic]*, in a case involving planned construction of public housing, declared in *Nucleus of Chicago Homeowners* v. *Lynn:* "To the extent that this claim can be construed to mean that HUD must consider the fears of the neighbors of prospective public housing tenants, we seriously question whether such an impact is cognizable under NEPA." 524 F.2d 225, 231 (1975), *cert. denied*, 424 U.S. 967 (1976). That decision was cited with approval by the Seventh Circuit in *First National Bank of Chicago* v. *Richardson*, which endorsed the *Hanly II* approach and added: "As regards public 'sensibilities' aroused by criminal defendants, we question whether such factors, even if amenable to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized." 484 F.2d 1369, 1380 n.13 (1973).

The cases are not unanimous on this point—a different panel of the Second Circuit reached a different result in *Hanly* v. *Mitchell (Hanly I)*, 460 F.2d 640, *cert. denied*, 409 U.S. 990 (1972), and the Fifth Circuit ruled in *Image of San Antonio* v. *Brown*, 570 F.2d 517 (1978), that socio-economic impacts may be considered where there is a primary physical impact on the environment—but the view that psychological impacts are outside the scope of NEPA is clearly the majority position of the Court of Appeals decisions on the subject.

The counter-argument is made that the cited cases are inapposite, because the allegations presented here deal not with mere psychological distress, but with physical manifestations, clinically detectable, resulting from that distress. In my view, the contention that there is a legal distinction between psychological stress that does and does not have clinically detectable

symptoms is without merit. Presumably, psychological distress will always be accompanied by physical symptoms in a certain proportion of the persons affected. As a legal matter, I see no basis for differentiating between psychological stress that has physical symptoms and that which is without physical manifestations as a means of deciding whether the Commission's licensing proceedings should adjudicate the nature and degree of such stress. In either case, the problems of quantification and proof would be such as to make rational factfinding extremely difficult, as licensing boards and the Commission struggled to decide between the largely unprovable assertions of opposing sets of expert witnesses.

It requires no great flights of the imagination to demonstrate that, absent extraordinary circumstances, the attempt to subject psychological stress to a cost-benefit analysis would have a destructive effect on the hearing process. The purpose of such a cost-benefit weighing of psychological impacts would be, presumably, to allow the Commission to require additional safety features if their cost can be justified in terms of reduced public stress. If psychological stress is determined to be an impact which must be mitigated (in the NEPA sense of that term), there would seem no obvious basis for differentiating between rationally and irrationally grounded anxieties. If anxieties are rationally based, the corrective measures which would alleviate the stress would presumably be justifiable in terms of protecting physical health and safety—irrespective of their effect on psychological stress. If the anxieties are irrationally based, on the other hand, then they are by definition not likely to be alleviated by a demonstration that some additional safety feature has been added. I cannot accept the proposition that, except under extreme conditions not presented in this case, it should be the task of the Commission's licensing boards to attempt to quantify the anxieties of the public, rational and irrational, and to calculate the reductions in those anxieties which one or another design modification might be expected to accomplish. Nor can I accept the proposition that a licensee's ratepayers should be required to bear the cost of adding unneeded features to an already safe plant in the

hope that these features will alleviate irrationally founded fears. Such an approach would not only turn the hearing process into an exercise in futility; it would also mean treating the American public with patronizing condescension.

The citizens of this country have a right to know the facts about nuclear safety, in terms which a lay person can understand. They have a right to know on what basis the agency charged with regulating nuclear safety makes its decisions. They also have a right to be regarded as capable of responding rationally to factual information. I cannot accept an approach that assumes irrationality on the part of a significant portion of the public and diverts the resources of this agency away from the task of assuring nuclear safety and devotes them instead to fruitless speculation about means of mollifying irrational fears.

The fundamental question remains the same. Did the Congress envision that the expert decision of a technically qualified agency would help to assuage public anxieties, or did it envision that the technical agency would allow its decision to hinge on its perception of the gravity of public anxieties? I believe that the answer to that question is clear, and that the appropriate means for the Commission to deal with psychological stress in this case is to make a sound safety decision and to let the factual bases of its decision be disseminated widely.

NEPA is a very broad statute and has had, as it was intended to have, a profound effect on agency decision making. But unless it is to displace the political process it must have some limits. It cannot be read to require that all conceivably relevant factors be heard by an agency including those already considered by Congress. It was intended and must be so construed to deal with *environmental* degradation. To be sure if one of a project's effects on the environment causes health problems, the associated mental impacts are in an appropriate consideration, but here we are being asked to consider effects apart from any effect on the environment.

Intervenors' argument is essentially that even if we are satisfied that the environmental impact is minimal, we must

nevertheless hear evidence on, and consider in our decision, their fears that we are wrong and the mental stress thus engendered. The short answer is that Congress had already decided that the country is to have a nuclear power program even if it makes some people uneasy.

SEPARATE VIEWS OF COMMISSIONER GILINSKY REGARDING CERTIFIED QUESTION ON PSYCHOLOGICAL STRESS ISSUE

The issue before the Commission is whether it should exercise its authority under the Atomic Energy Act and the National Environmental Policy Act to consider, along with the physical health effects, the mental health effects of a decision to restart TMI-1, the companion reactor to the one which suffered an accident in March, 1979.

In voting to allow the Licensing Board to admit contentions relating to mental health, I have been most strongly influenced by two factors. The first is the Board's recommendation, contained in its extremely well-formulated certification, that we allow it to hear these contentions. The second is the Commonwealth of Pennsylvania's argument that the Commission should investigate and consider the psychological effects of restarting TMI-1.

I attach particular importance to the position taken by the Commonwealth of Pennsylvania. Under the Atomic Energy Act, the Federal government has preempted all authority to regulate radiological hazards. Under this scheme, the Commission, the agency charged with enforcing the Federal law, has an obligation to be sensitive to the views of the preempted States. The Atomic Energy Act directs the Commission to "afford reasonable opportunity for state representatives to offer evidence, interrogate witnesses, and advise the Commission as to [an] . . . application without requiring such representatives to take a position for or against the granting of the

application."[1] When the Commonwealth requests that we "hear and consider evidence"[2] on an issue of this significance, we should heed its advice. A decision to consider stress in this post-accident case would not be a precedent for considering psychological stress in all future NRC actions.

Those opposed to admitting these contentions have argued that the proper way for the Commission to deal with mental health in this case is for it to make sound safety decisions and to widely advertise the factual bases of these decisions. Ironically, in its only ruling to date on safety issues in this case, the Commission took the narrowest possible view of its safety responsibilities to preserve the discredited assumptions of the hydrogen control rule.[3]

---

[1] Section 274(1) of the Act, 42 USC 2021. The fact that this section speaks of an application for a license should not lead one to conclude that it is inapplicable to a proceeding on whether to restart a licensed reactor following an accident at the same site. The basic intent of Congress was that the States should be heard by this agency and I am certain that if Congress could have foreseen the present proceeding, it would have included restart proceedings within the ambit of this provision.

[2] Brief of the Commonwealth of Pennsylvania, p. 10, October 4, 1979.

[3] 10 CFR 50.44. This regulation prescribes the hydrogen control measures which must be present in a reactor to cope with the hydrogen generated by the reaction of zirconium fuel cladding with water during the course of an accident. The rule is based on the assumption that no more than five percent of the zirconium fuel cladding will react with water. The principal investigations of the TMI-2 accident concluded that as much as fifty percent of the zirconium cladding reacted with water during the accident. The relevant Commission decision is: In the Matter of Metropolitan Edison Company, Docket No. 50-289, Commission Order of September 26, 1980.

DISSENTING VIEWS OF COMMISSIONER BRADFORD

We decide an uncomfortable but important issue when we define the Nuclear Regulatory Commission's role in dealing with psychological stress arising from the possible reopening of a nuclear power plant at Three Mile Island. We decide the role that we, as the nuclear licensing arm of the federal government, are to play in looking out for community and individual psychological well-being that we have had an inadvertent part in damaging. Since a majority agree that we may consider psychological stress,[1] we are really deciding whether we think that individual well-being in this context is up to the individual alone, or whether the best we can do is to be of some general use by behaving well in the future, or whether we should take a somewhat more disciplined and thorough look at the question in the context of the National Environmental Policy Act.

The question before us is not whether "Congress has already decided that the country is to have a nuclear power program even if it makes some people uneasy."[2] That proposition, though true, is not in issue. Nor are we deciding whether stress related to Unit 1 is provable, whether it is quantifiable, or whether we should do anything about it. We are deciding only whether the question is of sufficient importance to allow our Licensing Board to examine further the possibility that we ought to take measures to mitigate stress and its consequences if we permit TMI-1 to reopen.

* * *

I should note at the outset that I think it unlikely that the actual reopening of TMI-1 could hinge on the psychological stress contentions as framed here. I say this because none of the governmental entities that should be most knowledgable of a stress situation requiring permanent closure of TMI-1 are presenting such contentions. While the Commonwealth of

[1] The only doubt on this proposition is in the Ahearne opinion where it is viewed as "problematical" (p. 1).

[2] Hendrie opinion, p. 11.

Pennsylvania urges that we admit and consider stress-related contentions, its brief steers explicitly clear of any substantive involvement with such contentions. If the state and local entities do not feel that the stress issue warrants their involvement, it will be hard to avoid the conclusion that stress and its consequences are not of such overriding importance to the populace as a whole as to preclude operation of the plant.

Nevertheless, the NRC should consider psychological stress and community fears under the National Environmental Policy Act for the purpose of reducing any causes of such stress that may arise from its TMI licensing activities. This is the recommendation of the Licensing Board,[3] and it is the course consistent with NEPA's requirement that "to the fullest extent possible," "utiliz[ing] a systematic, inter-disciplinary approach which will insure the integrated use of the natural and social sciences," we "assure that presently unquantified environmental amenities be given appropriate consideration."[4]

---

[3] The Board's excellent discussion of the NEPA questions is attached as Appendix A. Because the Board has been thorough and because I agree with its legal analysis, I have not repeated that analysis in the body of this opinion. The Board opinion in its entirety is *Metropolitan Edison Company*, 11 NRC 297 (1980).

I should note some puzzlement with Chairman Ahearne's statement "agree(ing) with the Licensing Board that we are not *required* to consider psychological stress" (p. 2). The Licensing Board reaches no such conclusion, especially as to NEPA, and neither do I. Neither the Board nor I need to decide whether we are required by NEPA to consider stress since we conclude that the Commission should do so as a matter of discretion.

[4] 42 USC 4332(2)(A and B).

Three significant points are not in dispute among a majority of Commissioners:

1) The Commission has the authority, at least under NEPA, to consider psychological factors and to take actions necessary to mitigate them. [5]

2) The accident at TMI-2 gave rise to considerable and partially quantifiable community stress and stress-related illnesses and symptoms. The reopening of either TMI unit has the potential to reaggravate this situation to some degree. [6]

3) Some actions can be taken by NRC and the licensee to lessen psychological stress in the event that Unit 1 were permitted to operate again. Such actions may not be justifiable solely in terms of reduced radiation exposure, although—as the Board has pointed out by way of example—activities that

---

[5] The analogy to the consideration and mitigation of the equally subjective and unquantifiable subject of "visual insult" endorsed in *Public Service Company of New Hampshire* v. *NRC*, 582 F.2d 77, 82 (1978), is useful. This case is discussed in the Board opinion at p. 11 and p. 20. The Ahearne view that the court did not focus on the "propriety of considering various types of impacts" (Ahearne opinion, p. 2) seems to me to be irreconcilable with the Court's quite clear endorsement of the propriety of considering and mitigating visual impacts. These impacts were the basis for the NRC decision to reject 200 foot high steel lattice-work towers in favor of "75 foot wooden H-frames compatible with the surrounding forest." 582 F.2d, 77, 80. The court upheld this condition.

[6] The psychological impacts of a disaster of larger magnitude than TMI are analyzed in a considerable body of literature arising from the Buffalo Creek flood. See, for example, *Everything In Its Path: Destruction of Community in the Buffalo Creek Flood*, Kai T. Erikson (Simon and Schuster, New York, 1976), especially pp. 135-259. This reading provides extensive and astonishing examples of the tangible manifestations of post-accident stress. One must, of course, acknowledge the more drastic nature of that accident, but it does not always diminish one person's stress to know that another has been through worse. Furthermore, the Buffalo Creek dam was not rebuilt.

enhance the accuracy and credibility of information coming from the licensee and the NRC probably also enhance emergency preparedness.

What remains at issue is the Commission's choice of the most effective way to deal with stress-related harms. One view is that of the Board, with which I agree. The other view would exclude stress-related harms from this proceeding because they are being dealt with in other ways such as the activities of the NRC's TMI Program Office, the increased thoroughness of our technical review processes, and efforts to educate the public. This approach assumes a faith in NRC that may have existed to some degree before the accident, but that does not now exist for many of those members of the TMI public most likely to be presenting stress-related contentions and, for that matter, most likely to be susceptible to stress and its consequences. One need not fully share this public skepticism to find it understandable. [7]

---

[7] There is a theory of the TMI accident which holds that there was never any public danger and that the evacuation and resultant stress were ascribable solely to NRC miscalculations regarding the likelihood of an explosion. According to this line of thought, stress resulted from governmental bungling rather than real radiation danger and is therefore irrelevant to the licensing or the restart of any nuclear power plant.

In fact, there were several mistakes in the assessments of the TMI accident, and not all of them were on the side of caution. It is apparently true that the hydrogen bubble explosion that dominated public awareness starting on March 30, 1979, could not have occurred.

But it is equally true that on March 28, when all of our assessments and statements were reassuring, the core was, unbeknownst to us, partially uncovered for some hours. This circumstance could, in light of what we then regarded as likely iodine behavior, have been assumed to lead to much greater releases of radioactive iodine than actually occurred and perhaps also to molten fuel with uncertain consequences. While this was going on the Commission was supporting licensee efforts to depressurize into a configuration even more

The fact is that our technical evaluative processes alone cannot eliminate or substantially mitigate much of the stress in the TMI area. Those processes and this agency inadvertently helped to bring about the accident. People near TMI who know little else about NRC know that. Their lack of belief in the NRC and in its concern for them is a basic source of the problem. Furthermore, our technical review process cannot eliminate very low-level radiation exposures or some remote risks of a second accident. Concerns about this residual uncertainty have a tangible basis that the technical licensing process cannot reach.

The best way to assess the significance of these risks and effects in the special case of the TMI public is to permit them to be raised and considered as the Board has recommended. To do otherwise is to assume once again that the Commission did or will think of everything[8] (even though one of the reasons given for not considering stress is that we have little competence in the area). The Board has given hypothetical examples of ways in which conditions mitigating stress might be part of any restart decision. These examples contradict the claim that

---

dangerous (again unbeknownst to us) than the event actually in progress.

Thus, stress arising from uncertainty about NRC competence or regulatory techniques cannot be dismissed as irrational or unrelated to radiation hazard. Indeed, I can conceive of no way to alleviate the stress or fears of another person or group that does not begin with respecting that stress or fear. Such respect may not come easily when a fundamental source of their concern is doubt about our competence and our veracity. Nevertheless, the most herculean efforts to rebuild confidence will largely be a waste of time if they come freighted with our insistence that stress not be considered in the only forum that actually has the power to deal with and condition the restart of a TMI power plant.

[8] For another example, see "Further Commission Guidance for Power Reactor Operating Licenses," Statement of Policy, 45 FR 41739, June 16, 1980.

"There is no way to allay that fear except not to build or operate the reactor."[9]

Furthermore, it is hard to see how the Commission can at once refuse to devote resources "to fruitless speculation about ways of mollifying irrational fears"[10] and at the same time say that "the most appropriate way to take account of fears related to TMI is, first, to assure that the technical decision on restart is sound; and, second, if the decision is to permit restart, to make sure that the public understands, through accurate and comprehensible information, fully disseminated, the basis for the Commission's determination that the plant can operate safely."[11]

Commissioners cannot take refuge in the agency's inability to deal sensibly with stress while at the same time announcing that the matter is satisfactorily dealt with by measures already taken or in prospect. For one thing, these two propositions are incompatible. For another, no one else has the authority to assess and act upon stress-related issues in the context of licensing a TMI-1 reopening.[12] For another, as the Board itself

---

[9] Hendrie opinion, pp. 1-2. For more concrete examples of stress mitigation, we need look no further than last summer's krypton venting at TMI, where public anxiety persisted despite repeated NRC reassurances. This anxiety was in some measure relieved by two events that had no direct relationship to the NRC's appraisal of the radiation hazard: 1) the fact that the venting was for other reasons delayed until summer, allowing parents most concerned about it to take children from the area for as long as they wished without missing school, and 2) a Union of Concerned Scientists' report to Governor Thornburgh concluding that the krypton was not a threat to the public health — a report which was believable to some who would not accept the same conclusion from the NRC.

[10] *Ibid, p. 10.*

[11] *Ibid, p. 2. The same thought is expressed in the Ahearne opinion (p. 2).*

[12] I concur in Commissioner Gilinsky's discussion of this point. It is noteworthy that the Commonwealth of Pennsylvania seems able to do no more than urge us to take stress into account. Those who argue

observed (at pp. 21-22), ". . . to conclude summarily that those fears are baseless and therefore beyond NRC jurisdiction, as urged by the licensee, may produce additional stress in that the public may perceive an attitude that their fears are of no consequence, and that, therefore, they have no control over, or voice in the events affecting them."

* * *

Concerns regarding the treatment of stress in our adjudicatory process overstate the problem. Courts put a dollar value on similar contentions frequently, and for our purposes this is not a narrow issue of fact that is likely to turn on witness demeanor or veracity. The testimony could largely—perhaps entirely—be restricted to health professionals, with recountings and cross-examinings of individual citizen experiences held to a minimum. The Board opinion (pp. 22-23) is sensible on this point and notes that "intervenors have indicated their plans to approach the issue on a broader, more analytical level." As an agency, we would be no less equipped to cope with testimony of this sort than we were to appraise the visual impact of the transmission lines that we ordered rerouted around a Seabrook marsh or the aesthetics on which the staff rejected the Greene County site.

Furthermore, it is important to realize that this is a special case. The TMI accident released far more radiation than any other event at a commercial power reactor in U.S. history. It also resulted in the only evacuation recommendation to citizens around a commercial power reactor. It produced many documented stress-related symptoms, events, and illnesses, and some of the stress and stress-producing factors are likely still to be present. None of these conditions hold true for other

---

that by so doing we would "displace the political process" (Hendrie opinion, p. 11) have themselves fought in defense of the federally preemptive approach to nuclear licensing that had largely displaced any meaningful state political or regulatory process for dealing with citizen concerns arising from nuclear power.

reactor sites to remotely the same degree, if at all. Consequently, taking stress into account in post-accident decisionmaking does not commit the Commission to a similar course in other proceedings, a fact which could be made expressly clear. What is being considered here is a small part of a single proceeding, and claims of a serious resource drain—a recurrent theme in various Commission efforts to avoid public challenge [13]—are once again without foundation.

* * *

One final procedural note: Neither the order setting up this proceeding nor the Commission's rules compel a 2-2 vote to mean that stress-related contentions be denied, at least at this time. Indeed, if half the Commission ultimately feels that NEPA has been violated, restart would not be allowed on a 2-2 vote. I would have preferred that the 2-2 vote be taken to mean that the matter is held in abeyance until a Commission majority can rule one way or the other. Ideally, a record on stress could have been built, to be admitted or not when a majority decision was reached. Even if no record were built, the matter should still be considered to be in abeyance while the hearings continue. The real consequence of rejecting the contentions with a promise to revisit them later is to lessen their chances of full consideration by a new commissioner who is likely to feel that the job is large enough without dredging up a matter already laid more or less to rest.

---

[13] Hendrie opinion, p. 10. For other examples see: "Further Commission Guidance for Power Reactor Operating Licenses," Statement of Policy. 45 FR 41739, June 16, 1980.

Public Service Company of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), CLI-80-10, 11 NRC 438, 441-442 (March 13, 1980).

Wisconsin Electric Power Company (Point Beach, Unit 1), thus far unpublished order on request for hearing, May 12, 1980 (my dissent, p. 3).

CLI-81-20

Cite as 14 NRC 593 (1981)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-289
(Restart)

In the matter of

METROPOLITAN EDISON COMPANY, *et al.*
(Three Mile Island Nuclear Station, Unit 1)

COMMISSIONERS:

NUNZIO J. PALLADINO, Chairman
VICTOR GILINSKY
PETER BRADFORD
JOHN F. AHEARNE
THOMAS M. ROBERTS

September 17, 1981

On reconsideration of a question on which a four-member Commission had divided equally before, the result of which was to exclude consideration of psychological stress contentions from this restart proceeding, a full Commission, by majority vote, decides to adhere to the previous result.

ORDER

In its Memorandum and Order of December 5, 1980, the Commission stated that it was evenly divided on the question of whether the Licensing Board considering the Three Mile Island Unit 1 restart proceeding should accept contentions related to psychological stress and community deterioration. The order stated that procedurally, the effect of the tie vote was to exclude such contentions from the restart proceeding. The Commission stated that it would "reconsider and vote on

the question when the makeup of the Commission is altered by the appointment and confirmation of a fifth Commissioner." CLI-80-39, 12 NRC 607, 608.

On September 10, 1981, a majority of Commissioners voted to adhere to the result previously reached, *i.e.*, to continue to exclude psychological stress and community deterioration contentions from the restart proceeding.

Separate views of Commissioner Gilinsky are attached.

It is so ORDERED.

For the Commission

Samuel J. Chilk
SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, DC,
this 17th day of September, 1981.

COMMISSIONER GILINSKY'S SEPARATE VIEWS

As the Commonwealth of Pennsylvania had previously recommended that we admit this contention to the hearing, I would have solicited the Commonwealth's present views before acting.

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

SEPTEMBER TERM, 1981

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY,

Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and UNITED STATES OF AMERICA

Respondents

METROPOLITAN EDISON COMPANY *et al.*
(PUBLIC UTILITIES),

Intervenors.

Filed April 2 1982.

George A. Fisher
GEORGE A. FISHER
Clerk

Petition for Review of an Order of the United States Nuclear Regulatory Commission.

Before WRIGHT, Circuit Judge, McGOWAN, Senior Circuit Judge, and WILKEY, Circuit Judge.

AMENDED JUDGMENT

This cause came on to be heard on a petition for review of an order of the United States Nuclear Regulatory Commission and was briefed and argued by counsel. A judgment was issued on January 7, 1982, Judge Wilkey dissenting. In light of changed circumstances and further consideration, this court has decided to modify its order to the Commission. On consideration thereof,

It is ORDERED and ADJUDGED by this court that this case is remanded to the Commission for a determination

whether, since the preparation of the original environmental impact statement for the nuclear facility at Three Mile Island, Unit 1 (TMI-1), significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility. The Commission may choose the procedures by which it makes this determination. If the Commission finds that such significant circumstances or information exist, it shall prepare a supplemental environmental impact statement which considers not only effects on psychological health but also effects on the well-being of the communities surrounding Three Mile Island.

It is FURTHER ORDERED and ADJUDGED by this court that, in light of the current operating difficulties at TMI-1, it is no longer necessary in order to preserve the status quo to enjoin the Commission from deciding to restart TMI-1 until it has complied with the requirements of the National Environmental Policy Act (NEPA). The injunction granted on January 7, 1982 is hereby vacated. If subsequently the Commission intends to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA, it shall provide the court and the petitioner with thirty days' notice thereof.

Opinions to follow.

Per Curiam

For the Court

/s/ George A. Fisher
GEORGE A. FISHER
Clerk

Circuit Judge Wilkey dissents for the reasons stated in his dissent from the earlier Judgment and in his opinion to follow.

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

SEPTEMBER TERM, 1981

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY,
Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and UNITED STATES OF AMERICA
Respondents

METROPOLITAN EDISON COMPANY *et al.*
(PUBLIC UTILITIES),
Intervenors.

Filed January 7, 1982.

George A. Fisher
GEORGE A. FISHER
Clerk

Petition for Review of an Order of the United States Nuclear Regulatory Commission.

Before WRIGHT, Circuit Judge, McGOWAN, Senior Circuit Judge, and WILKEY, Circuit Judge.

JUDGMENT

This cause came on to be heard on a petition for review of an order of the United States Nuclear Regulatory Commission and was briefed and argued by counsel.

On consideration thereof, it is ORDERED and ADJUDGED by this court that the order of the Nuclear Regulatory Commission under review in this cause is hereby vacated.

It is FURTHER ORDERED and ADJUDGED by this court that the Commission shall prepare an environmental assessment regarding the effects of the proposed restart of the

nuclear facility at Three Mile Island Unit One (TMI-1) on the psychological health of neighboring residents and on the well-being of the surrounding communities. The Commission shall then determine, on the basis of this environmental assessment, whether the National Environmental Policy Act requires preparation of a full environmental impact statement.

It is FURTHER ORDERED and ADJUDGED by this court that, until the Commission has complied with the requirements of the National Environmental Policy Act as described in the preceding paragraph, it shall not make a decision to restart TMI-1.

It is FURTHER ORDERED and ADJUDGED by this court that the Commission shall prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.

Opinions to follow.

Per Curiam

For the Court

/s/ George A. Fisher
GEORGE A. FISHER
Clerk

Circuit Judge WILKEY dissents. Whether designedly so or not, this order will bar the resumption of furnishing nuclear power from TMI-1, at which there has never been an accident, until such time as the Nuclear Regulatory Commission satisfies this court, first by an "environmental assessment," and then, most likely, later by a required "full environmental impact statement," as to its consideration of certain new environmental factors. This delay is imposed because of the asserted impact "on the psychological health of neighboring residents," an "impact" which has never before been considered as covered by the National Environmental Policy Act.

This is yet another example of a court inventing new procedural requirements for an administrative agency in a manner

which has enormous substantive consequences. *See Vermont Yankee Nuclear Power Corp.* v. *NRDC*, 435 U.S. 519 (1978). The court is concerned that "the well-being of the surrounding communities" be assessed, yet while this is taking place, for the communities near TMI-1 it will be a colder winter than predicted.

NATIONAL ENVIRONMENTAL POLICY ACT

Sections 2, 101 and 102 (42 U.S.C. §§ 4321, 4331, 4332)

§ 4321. Congressional declaration of purpose

The purposes of this chapter are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

Pub. L. 91-190, § 2, Jan. 1, 1970, 83 Stat. 852.

§ 4331. Congresssional declaration of national environmental policy

(a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate

Federal plans, functions, programs, and resources to the end that the Nation may—

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Pub. L. 91-190, Title I, § 101, Jan. 1, 1970, 83 Stat. 852.

§ 4332. Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the

Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) the responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement of such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by subchapter II of this chapter.

Pub. L. 9-190, Title I, § 102, Jan. 1, 1970, 83 Stat. 853; Pub. L. 94-83, Aug. 9, 1975, 89 Stat. 424.

[October 5, 1979]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKET NO. 50-289

In the matter of

METROPOLITAN EDISON COMPANY, *et al.*
(Three Mile Island Nuclear Station, Unit No. 1)

PEOPLE AGAINST NUCLEAR ENERGY
DRAFT CONTENTIONS

Pursuant to 10 CFR 2.714(b) and the Atomic Safety and Licensing Board's Order of September 21, 1979, People Against Nuclear Energy (PANE) submits the following draft contentions:

1.) Renewed operation of Three Mile Island, Unit 1 (TMI 1) would cause severe psychological distress to PANE's members and other persons living in the vicinity of the reactor. The accident at Unit 2 has already impaired the health and sense of well being of these individuals, as evidenced by their feelings of increased anxiety, tension and fear, a sense of helplessness and such physical disorders as skin rashes, aggravated ulcers, and skeletal and muscular problems. Such manifestations of psychological distress have been seen in the aftermath of other disasters. The possibility that TMI Unit 1 will reopen severely aggravates these problems. As long as this possibility exists, PANE's members and other persons living in the communities around the plant will be unable to resolve and recover from the trauma which they have suffered. Operation of Unit 1 would be a constant reminder of the terror which they felt during the accident, and of the possibility that it will happen again. The distress caused by this ever present spectre of disaster makes it impossible for the NRC to operate TMI 1 without endangering the public health and safety.

2.) Renewed operation of TMI 1 would cause severe harm to the stability, cohesiveness and well being of the communities in the vicinity of the reactor. Community institutions have already been weakened as a result of a loss of citizen confidence in the ability of these institutions to function properly and in a helpful manner during a crisis. The potential for a reoccurrence of the accident will further stress the community infrastructure, causing increased loss of confidence and a breakdown of the social and political order. Sociologists such as Kai Erikson have documented similar phenomena in other communities following disasters.

The perception, created by the accident, that the communities near Three Mile Island are undesirable locations for business and industry, or for the establishment of law or medical practice, or homes compounds the damage to the viability of the communities. Community vitality depends upon the ability to attract and keep persons, such as teachers, doctors, lawyers, and businesses critical to economic and social health. The potential for another accident, should TMI 1 be allowed to operate, would compound and make permanent the damage, trapping the residents in disintegrating and dying communities and discouraging the influx of essential growth.

D
DEC 1 1982
ALEXANDER L. STEVAS,

No. 81-2399, No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY, and PENNSYLVANIA ELECTRIC COMPANY, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

UNITED STATES NUCLEAR REGULATORY COMMISSION and THE UNITED STATES OF AMERICA, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

On Writs Of Certiorari To The United States Court Of Appeals For The District Of Columbia Circuit

JOINT APPENDIX

REX E. LEE
Solicitor General
United States Department of Justice
Washington, D.C. 20530
(202) 633-2217

LEONARD BICKWIT, JR.
General Counsel
Nuclear Regulatory Commission
Washington, D.C. 20555
(202) 634-3288
Counsel for Petitioners Nuclear Regulatory Commission and United States of America

JAMES B. HAMLIN
SHAW, PITTMAN, POTTS & TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Counsel for Petitioners Metropolitan Edison Company, et al.

WILLIAM S. JORDAN, III
HARMON & WEISS
1725 I Street, N.W.
Suite 506
Washington, D.C. 20006
(202) 833-9070
Counsel for Respondent People Against Nuclear Energy

PETITIONS FOR CERTIORARI FILED JULY 1, 1982 AND AUGUST 30, 1982
CERTIORARI GRANTED NOVEMBER 1, 1982

TABLE OF CONTENTS

	Page
Relevant Docket Entries	1
Order of the U.S. Nuclear Regulatory Commission, dated July 2, 1979, 44 Fed. Reg. 40,461 (1979)	8
Order and Notice of Hearing of the U.S. Nuclear Regulatory Commission, dated August 9, 1979, CLI-79-8, 10 N.R.C. 141 (1979)	9
People Against Nuclear Energy, Preliminary Plan for Presentation of Evidence on Psychological Distress, dated November 2, 1979	26
Certification to the Commission on Psychological Distress Issues by the Atomic Safety and Licensing Board, dated February 22, 1980, LBP-80-8, 11 N.R.C. 297 (1980)	29
Environmental Impact Appraisal by the NRC Division of Engineering Evaluating the Proposed Restart of Three Mile Island, Unit 1, dated March 27, 1981	48
Supplement to Environmental Impact Appraisal by the NRC Division of Engineering Evaluating the Proposed Restart of Three Mile Island, Unit 1, dated May 11, 1981	66
Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI, pp. 12-19, 34-35, 118, 126-130 (October 1979)	88

The following opinions, decisions, judgments and orders have been omitted in printing this Joint Appendix because they appear on the following pages in the appendix to the printed Petition for Certiorari in No. 81-2399:

People Against Nuclear Energy, Draft Contentions Relating to Psychological Distress, filed October 5, 1979	115a
Memorandum and Order of the U.S. Nuclear Regulatory Commission on Psychological Distress, dated December 5, 1980, CLI-80-39, 12 N.R.C. 607 (1980)	77a
Order of the U.S. Nuclear Regulatory Commission on Psychological Distress, dated September 17, 1981, CLI-81-20, 14 N.R.C. 593 (1981)	101a

Judgment of the Court of Appeals, issued January 7, 1982 ..... 105a

Amended Judgment of the Court of Appeals, issued April 2, 1982 ..... 103a

Opinions of the Court of Appeals and Amended Judgment, issued May 14, 1982 ..... 1a

RELEVANT DOCKET ENTRIES

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY, *Petitioner*,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION and THE UNITED STATES OF AMERICA, *Respondents*,

METROPOLITAN EDISON COMPANY, *et al.*, *Intervenors*.

DATE	FILINGS — PROCEEDINGS
02-03-81	4-Petitioner's petition for review of an order of the NRC
02-06-81	4-Motion of Metropolitan Edison Company, et al. for leave to intervene
02-12-81	4-NRC's motion to dismiss petition for review
02-23-81	4-Petitioner's opposition to NRC's motion to dismiss
03-05-81	Clerk's order granting the motion of Metropolitan Edison Company, et al. (Public Utilities) for leave to intervene
03-05-81	4-Intervenors' motion to expedite consideration of NRC's motion to dismiss and petitioner's petition for review
03-05-81	4-Intervenors' memorandum in opposition to motion to dismiss and in support of motion to expedite
03-05-81	4-Petitioner's opposition to intervenors' motion to expedite

DATE	FILINGS — PROCEEDINGS
03-05-81	4-Intervenors' reply in support of their motion to expedite
04-14-81	Per Curiam order that respondent's motion to dismiss is denied; and that the motion to expedite consideration of the petition for review is denied; and that the time for filing the certified index to the record herein is extended 10 days from the date of this order; CJ McGowan, Tamm and Wald (who did not participate), CJ's
04-24-81	Certified Index to Record
08-24-81	7-Joint appendix
09-02-81	4-Petitioner's motion for expedited argument and decision
09-02-81	15-Petitioner's brief
09-02-81	15-Petitioner's reply brief
09-04-81	15-Respondent's brief
09-08-81	15-Intervenors' brief
09-09-81	4-NRC's response to petitioner's motion for expedited argument and decision
09-09-81	4-Intervenors' memorandum in opposition to Petitioner's motion for expedited argument and decision
09-22-81	Per Curiam order that petitioner's motion for expedited argument and decision is denied. The Court notes that oral argument in this case has already been scheduled for November 17, 1981, and that the respondent Commission has represented to this Court that the Commission is unlikely to authorize restart of Three Mile Island Unit 1 before December, 1981. Any subsequent

DATE	FILINGS — PROCEEDINGS
	motions in this case will be directed to the merits panel already assigned to this case; Wright, Mikva (who did not participate) and Ginsburg, CJ's
10-06-81	4-Letter from NRC stating that it adheres to its original decision
11-10-81	Clerk's order, sua sponte, that the following times are allotted for the oral argument of this case: Petitioner - 20 minutes; Respondents - 20 minutes
11-10-81	15-Intervenors' supplemental brief
11-17-81	Argued before Wright, Wilkey*, CJ's; and McGowan, SCJ. Commission to file supplemental memorandum
11-25-81	4-Respondents' memorandum on the status of the Three Mile Island Unit 1 restart proceeding
12-01-81	4-Intervenors' response to NRC's report on status of TMI-1 restart proceeding
12-02-81	Per Curiam order, sua sponte, that on or before Monday, December 7, 1981 the Nuclear Regulatory Commission file with the Clerk of the Court answers to the following questions: Have any parties other than those in Appeal No. 81-1131 initiated any proceedings of any kind seeking to compel the Commission to issue an environmental impact statement (EIS) or a supplemental EIS with respect to the restart of Three Mile Island Nuclear Station Unit No. 1? If so, provide the court with a status report thereon. What is the date of the Commission's negative declaration indicating that no EIS or supplemental EIS would be prepared before the start of Three Mile Island Unit No. 1? Have any parties sought review of this

DATE	FILINGS — PROCEEDINGS
	action by the Commission? If so, provide the court with a status report thereon; Wright, CJ; McGowan, SCJ; and Wilkey, CJ
12-07-81	4-NRC's response to the Court's order of 12/02/81
12-18-81	4-NRC's motion for leave to file documents with the Court
01-05-82	Per Curiam order that NRC's motion for leave to file documents is granted; Wright, CJ; McGowan, SCJ; and Wilkey, CJ
01-05-82	4-NRC's documents (Memorandum and order on NEPA - Compliance issues) - filed per above order
01-05-82	4-NRC's document (Blue Book - Partial Initial Decision) - filed per above order
01-07-82	Judgment that the order of the NRC under review is vacated. Further ordered that the NRC shall prepare an environmental assessment regarding the effects of the proposed restart of the nuclear facility at Three Mile Island Unit One on the psychological health of neighboring residents and on the well-being of the surrounding communities. Until the NRC has complied with the requirements of the NEPA as described in the preceeding paragraph, it shall not make a decision to restart TMI-1. The NRC shall prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act. Judge Wilkey dissents (see judgment for details). Opinions to follow
01-07-82	Order on issuance of mandate
01-11-82	4-Respondents' motion to extend time to file rehearing of this Court's judgment of 01/07/82

DATE	FILINGS — PROCEEDINGS
01-11-82	4-Intervenors' motion to extend time to file petition for rehearing
01-15-82	Per Curiam order that respondents' motion of extension of time is granted and the time within which to file petitions for rehearing and/or suggestions for rehearing en banc shall commence on the day following the issuance of the opinion(s) of the Court; Wright, CJ; McGowan, SCJ; and Wilkey, CJ
01-18-82	4-Petitioner's consent to motions for extension of time
03-30-82	4-NRC's response to the Court's order of 01/07/82
04-02-82	Amended judgment that this case is remanded to the NRC for a determination of whether significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility. Also adjudged that the injunction granted on 1-7-82 is vacated. Opinions to follow
04-07-82	4-Petitioner's motion to permit supplemental briefing
04-15-82	Per Curiam order that any written comments which either petitioner, respondents, or intervenors may wish to make with respect to the Commission's memorandum and order, dated March 30, 1982, are to be filed within 10 days from the issuance of this order; Wright and Wilkey, CJs and SCJ McGowan
04-15-82	4-Intervenors' opposition to petitioner's motion to permit supplemental briefing
04-16-82	4-Respondent's (NRC) response to motion to permit supplemental briefing

DATE	FILINGS — PROCEEDINGS
04-20-82	4-Transcripts of oral argument
04-23-82	4-Intervenors' (Metropolitan Edison Co., et al.) comments on NRC's memorandum and order concerning the Atomic Energy Act
04-26-82	4-Petitioner's comments on NRC's memorandum and order of 3/30/82
05-14-82	Opinions for the Court filed by CJs Wright and Wilkey (AEA issue)
05-14-82	Dissenting opinion filed by CJ Wilkey
05-14-82	Dissenting opinion filed by CJ Wright (AEA issue)
06-02-82	4-Intervenors' (Metropolitan Edison Co., et al.) motion to extend time to file petition for rehearing and suggestion for rehearing en banc to 6/28/82
06-08-82	Clerk's order that the motion of the Public Utilities for extension of time is granted and the time within which to file petitions for rehearing and/or suggestions for rehearing en banc is established as 06/28/82
06-24-82	Copy of letter from Clerk, SC extending time to file petition for writ of certiorari in SC No. A-1106 to August 20, 1982 (Letter dated 6/23/82)
07-07-82	Notice from Clerk, Supreme Court that petition for writ of certiorari was filed on 07-01-82 in SC No. 81-2399
08-17-82	Copy of letter from Clerk, SC extending time to file petition for writ of certiorari to 8/30/82 in SC No. A-1106 on August 12, 1982

DATE	FILINGS — PROCEEDINGS
09-01-82	Notice from Clerk, Supreme Court that petition for writ of certiorari was filed on 08-30-82 in SC No. 82-358 (United States Nuclear Regulatory Commission)
11-02-82	Certified copy of order from Clerk, Supreme Court that petition for writ of certiorari was granted on 11-01-82 in 81-2399

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

[Docket No. 50-289]

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1); Order

In view of the variety of issues raised by the accident at the Three Mile Island Unit No. 2 facility, the Commission presently lacks the requisite reasonable assurance that the same licensee's Three Mile Island Unit No. 1 facility, a nuclear power reactor of similar design, can be operated without endangering the health and safety of the public. Accordingly, we direct that the Unit No. 1 facility, presently in a shutdown condition, shall remain shut down until further order of the Commission itself. The Commission has further determined that it is in the public interest that a hearing precede restart of the facility. The Commission will also issue an order within thirty (30) days specifying in detail the basis for its concerns, and the procedures to govern further proceedings in this matter. The licensee may file a written answer to this Order no later than twenty (20) days after the issuance of the detailed Order.

The Commission has found that the public health, safety and interest require that this order be effective immediately.

It is so ordered.

Dated at Washington, D.C. this 2nd day of July 1979.

For the Commission.

John C. Hoyle,
Acting Secretary of the Commission.

10 NRC 141 (1979)

CLI 79-8

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:
Joseph M. Hendrie, Chairman
Victor Gilinsky
Richard T. Kennedy
Peter A. Bradford
John F. Ahearne

In the Matter of

METROPOLITAN EDISON COMPANY — Docket No. 50-289

(Three Mile Island Nuclear Station, Unit No. 1) — August 9, 1979

ORDER AND NOTICE OF HEARING

In an immediately effective order the Commission orders Three Mile Island, Unit No. 1 to remain in a cold shutdown condition until the issuance of a further order by the Commission following (1) satisfactory completion by the licensee of certain "short-term" actions and (2) reasonable progress by the licensee toward satisfactory completion of certain "long-term" actions. The Commission orders a hearing; and establishes a licensing board to rule on petitions to intervene, conduct the hearing, render an initial decision and, upon issuance of a partial initial decision or initial decision, to certify the record to the Commission itself for final decision. The Commission sets out guidelines on the conduct of the hearing including the raising of issues relating to the licensee's financial qualifications and specifying interlocutory consideration of issues such as the psychological distress and others arising from the continuing impact of aspects of the Three Mile Island accident unrelated directly to exposure to radiation on the part of citizens living near the plant. The Commission establishes a procedure to be applied in the event the Licensing Board issues

a decision authorizing resumption of plant operation for determining whether the provision of the instant order requiring the plant to remain shutdown should remain immediately effective pending appellate review of the merits of the Board's decision by the Commission.

I.

The Metropolitan Edison Company (the licensee) is holder of Facility Operating License No. DPR-50 which authorizes the operation of the nuclear power reactor known as Three Mile Island Nuclear Station, Unit No. 1 (the facility or TMI-1), at steady state power levels not in excess of 2535 megawatts thermal (rated power). The facility is a Babcock and Wilcox (B&W) designed pressurized water reactor (PWR) located at the licensee's site ten miles southeast of Harrisburg, Pennsylvania.

II.

On July 2, 1979, the Commission ordered that the facility remain in a cold shutdown condition until further order of the Commission and stated that a hearing will be conducted prior to any restart of the facility. On the basis of that hearing the Commission will determine whether any further operation will be permitted and, if so, under what conditions. The Commission herein specifies the basis for its concerns and the procedures to govern further proceedings in this matter. For the reasons later set forth, the Commission has determined that satisfactory completion of certain short-term actions and resolution of various concerns described herein are required to provide reasonable assurance that the facility can be operated without endangering the health and safety of the public. The Commission has determined that certain additional long-term actions are, for the reasons given below, required to be completed as promptly as practicable, and that reasonable progress on the completion of such actions prior to restart is required, in order to provide reasonable assurance that the facility can be operated safely over the long term. This Order and Notice of Hearing further establishes procedures for a hearing

and decision on the particular issues identified in Section V of this Order. The Commission has determined that hearing and decision with review thereof (as provided in Sections V and VI below) on the issues specified in this order is required and that such hearing, decision and review on the issues relating to the actions required prior to restart of the facility must be completed prior to any Commission Order lifting the suspension of operation.

Accordingly, the Atomic Safety and Licensing Board designated to conduct this proceeding should give priority to consideration of those issues which are related directly to suspension of operation. To the extent feasible, the Board should defer full review of the issues related to the longer-term actions until after the rendering of a partial initial decision regarding the suspension-related issues.

The Commission's July 2, 1979 Order recited that "the Commission presently lacks the requisite reasonable assurance that the . . . Licensee's Three Mile Island Unit No. 1 Facility . . . can be operated without endangering the health and safety of the public." The bases for that conclusion (which remains valid) are: In the course of its evaluation to date of the accident at the Three Mile Island Unit No. 2 facility, which utilizes a B&W designed PWR, the Nuclear Regulatory Commission staff has ascertained that B&W designed reactors appear to be unusually sensitive to certain off-normal transient conditions originating in the secondary system. The features of the B&W design that contribute to this sensitivity are: (1) design of the steam generators to operate with relatively small liquid volume in the secondary side; (2) the lack of direct initiation of reactor trip upon the occurrence of off-normal conditions in the feedwater system; (3) reliance on an integrated control system (ICS) to automatically regulate feedwater flow; (4) actuation before reactor trip of a pilot-operated relief valve on the primary system pressurizer (which, if the valve sticks open, can aggravate the event); and (5) a low steam generator elevation (relative to the reactor vessel) which provides a smaller driving head for natural circulation.

Because of these features, B&W designed reactors place more reliance on the reliability and performance characteristics of the auxiliary feedwater system, the integrated control system, and the emergency core cooling system (ECCS) performance to recover from frequent anticipated transients, such as loss of offsite power and loss of normal feedwater, than do other PWR designs. This, in turn, places a large burden on the plant operators in the event of off-normal system behavior during such anticipated transients.

As a result of a preliminary review of the Three Mile Island Unit No. 2 accident chronology, the NRC staff initially identified several human errors that occurred during the accident and contributed significantly to its severity. All holders of operating licenses, except Metropolitan Edison, whose plants were already shut-down, were subsequently instructed to take a number of immediate actions to avoid repetition of errors, in accordance with bulletins issued by the Commission's Office of Inspection and Enforcement (IE). In addition, the NRC staff began an immediate reevaluation of the design features of B&W reactors to determine whether additional safety corrections or improvements were necessary with respect to these reactors. This evaluation involved numerous meetings with B&W and certain of the affected licensees.

The evaluation identified design features as discussed above which indicated that B&W designed reactors are unusually sensitive to certain off-normal transient conditions originating in the secondary system. As a result, an additional bulletin was issued by IE which instructed holders of operating licenses for B&W designed reactors to take further actions, including immediate changes to decrease the reactor high pressure trip point and increase the pressurizer pilot-operated relief valve setting. Also, as a result of this evaluation, the NRC staff identified certain other safety concerns that warranted additional short-term design and procedural changes at operating facilities having B&W designed reactors. These were identified as items (a) through (e) on page 1-7 of the Office of Nuclear Reactor Regulation Status Report to the Commission of April 25, 1979.

In addition to the items identified for the other B&W reactors, the unique circumstances at TMI require that additional safety concerns identified by the NRC staff be resolved prior to restart. These concerns result from (1) potential interaction between Unit 1 and the damaged Unit 2, (2) questions about the management capabilities and technical resources of Metropolitan Edison, including the impact of the Unit 2 accident on these, (3) the potential effect of operations necessary to decontaminate the Unit 2 facility on Unit 1, and (4) recognized deficiencies in emergency plans and station operating procedures. Based on the above, the Commission's Director of Nuclear Reactor Regulation (NRR) has recommended that the following actions (the "short-term actions") be required of the licensee to resolve the concerns stated herein and permit a finding of reasonable assurance that the facility can safely resume operation.

1. The licensee shall take the following actions with respect to TMI-1:

   (a) Upgrade the timeliness and reliability of the Emergency Feedwater (EFW) system by performing the items specified in Enclosure 1 of the licensee's June 28, 1979 letter. Changes in design will be submitted to the NRC staff for review.

   (b) Develop and implement operating procedures for initiating and controlling EFW independent of Integrated Control System (ICS) control.

   (c) Install a hard-wired control grade reactor trip on less [loss] of main feedwater and/or turbine trip.

   (d) Complete analyses for potential small breaks and develop and implement operating instructions to define operator action.

   (e) Augment the retraining of all Reactor Operators and Senior Reactor Operators assigned to the control room including training in the areas of natural circulation and small break loss of coolant accidents

including revised procedures and the TMI-2 accident. All operators will also receive training at the B&W simulator on the TMI-2 accident and the licensee will conduct a 100 percent reexamination of all operators in these areas. NRC will administer complete examinations to all licensed personnel in accordance with 10 CFR 55.20-23.

2. The licensee shall provide for NRC review and approval of all applicable actions specified in IE Bulletins 79-05A, 79-05B, and 79-05C.

3. The licensee shall improve his emergency preparedness in accordance with the following:

   (a) Upgrade emergency plans to satisfy Regulatory Guide 1.101 with special attention to action level criteria based on plant parameters.

   (b)* Establish an Emergency Operations Center for Federal, State, and Local Officials and designate a location and an alternate location and provide communications to plant.

   (c) Upgrade offsite monitoring capability, including additional thermo-luminescent dosimeters or equivalent.

   (d) Assess the relationship of State/Local plans to the licensee plans so as to assure the capability to take emergency actions.

   (e) Conduct a test exercise of its emergency plan.

4. The licensee shall demonstrate that decontamination and/or restoration operations at TMI-2 will not affect safe operations at TMI-1. The licensee shall provide separation and/or isolation of TMI 1/2 radioactive liquid transfer lines, fuel handling areas, ventilation systems, and sampling lines. Effluent monitoring instruments shall have the capability of discriminating between effluents resulting from Unit 1 or Unit 2 operations.

5. The licensee shall demonstrate that the waste management capability, including storage and processing, for solid, liquid, and gaseous wastes is adequate to assure safe operation of TMI-1, and that TMI-1 waste handling capability is not relied on by operations at TMI-2.

6. The licensee shall demonstrate his managerial capability and resources to operate Unit 1 while maintaining Unit 2 in a safe configuration and carrying out planned decontamination and/or restoration activities. Issues to be addressed include the adequacy of groups providing safety review and operational advice, the management and technical capability and training of operations staff, the adequacy of the operational Quality Assurance program and the facility procedures, and the capability of important support organizations such as Health Physics and Plant Maintenance.

7. The licensee shall demonstrate his financial qualifications to the extent relevant to his ability to operate TMI-1 safely.

8. The licensee shall comply with the Category A recommendations as specified in Table B-1 of NUREG-0578.

The Commission has additional concerns, which, though they need not be resolved prior to resumption of operation at Three Mile Island Unit 1, must be satisfactorily addressed in a timely manner. The Commission's Director of Nuclear Reactor Regulation (NRR) has recommended that the following actions (the "long-term actions") be required of the licensee to resolve these concerns and permit a finding of reasonable assurance of the safety of long-term operation. These are:

1. submit a failure mode and effects analysis of the ICS to the NRC staff as soon as practicable;

2. give continued attention to transient analysis and procedures for management of small breaks by a formal program set up to assure timely action of these matters;

3. comply with the Category B recommendations as specified in Table B-1 of NUREG-0578; and,

4. improve emergency preparedness in accordance with the following:

   (a) modify emergency plans to address changing capabilities of plant instrumentation.

   (b) extend the capability to take appropriate emergency actions for the population around the site to a distance of ten miles.

III.

Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, and the Commission's rules and regulations in 10 CFR, it is hereby ordered that:

(1) the licensee shall maintain TMI-1 in a cold shutdown condition until further order of the Commission which will be issued following satisfactory completion of the required short-term actions and reasonable progress toward satisfactory completion of those required long-term actions referred to in section IV (such short-term and long-term actions to be considered "required" for purposes of this clause which are determined by the Commission, after review of the Licensing Board's decision, to be necessary and sufficient to provide adequate protection of the public health and safety); and

(2) the licensee shall satisfactorily complete the long-term actions listed in Table B-1 of NUREG-0578 on the schedule set out in such table and such other long-term actions listed above as promptly as practicable.

IV.

The Commission has determined that, in light of the concerns listed above, the public health, safety, and interest require that the portion of the order referred to in clause (1) of Section III shall be immediately effective. The long-term actions referred to in such clause shall be those long-term actions

listed in Section II as to which the Commission, prior to the date of this order, has issued immediately effective orders against other licensees. If the Commission issues immediately effective orders against other licensees imposing requirements with respect to other long-term actions, it will, to the extent appropriate in the circumstances, issue orders, effective immediately, to require that the licensee demonstrate reasonable progress toward completion of such other actions as a condition to restart. If the Board determines that operation can be resumed upon completion of certain specific short-term actions by the licensee, it shall consider the extent to which the licensee has demonstrated reasonable progress toward completion of the long-term actions described in this section. If it finds that the licensee has demonstrated reasonable progress, it shall recommend resumption of operation upon completion of the short-term actions. If it cannot make such a finding, it shall recommend that operation be resumed at a date that it believes appropriately reflects the importance of the action involved, the time lost because such progress had not been made on the prescribed schedule and the overriding need to provide adequate protection for the public health and safety.

V.

An Atomic Safety and Licensing Board consisting of Ivan W. Smith, Esq., Chairman, Dr. Walter H. Jordan, Member, and Dr. Linda W. Little, Member, is hereby established to rule on petitions to intervene, to conduct the hearing ordered herein, and to render an initial decision in accordance with 10 CFR 2.760. The Atomic Safety and Licensing Board will issue a further order specifying the date and place of the hearing and any prehearing conferences. The Board should hold its sessions in the vicinity of the facility and it should attempt to schedule some of its sessions in the evening or on weekends to permit the maximum possible public attendance.

The hearing will be conducted in accordance with the applicable provisions of subpart G of the Commission's Rules of Practice set forth in 10 CFR Part 2. The provisions of 10 CFR

2.715a (consolidation of parties), 2.751a (special prehearing conference and order), 2.752 (prehearing conference and order) shall apply to this proceeding.

The Commission's primary commitment is to a fair and thorough hearing and decision. Given this overriding imperative, it is the Commission's expectation that the Board will conduct the proceeding expeditiously. The Board should as early as possible publish an appropriate schedule and attempt to meet it. A tentative schedule composed by the Commission is attached for the Board's possible use, although the Board should not be constrained by it. The Board is instructed to explore opportunities to shorten the time limits provided in the Rules pursuant to 10 CFR 2.711. The Licensing Board is hereby instructed to consolidate participation of parties pursuant to 10 CFR 2.715a to the maximum extent practicable consistent with the provisions of that regulation. In its review of the Initial Decision, the Commission will invoke 10 CFR 2.711 to shorten time limits where feasible. It is hereby directed, pursuant to 2.760(a), that, upon issuance of the initial decision (or partial initial decision) in this matter, the record be certified to the Commission itself for final decision. Any party may take an appeal directly with the Commission by filing exceptions to the initial decision (or partial initial decision) in accordance with the provisions of 10 CFR 2.762. Commission review of the initial decision will be conducted in accordance with 10 CFR 2.770.

In the conduct of this proceeding the Licensing Board should exercise its authority to seek to ensure that it receives all information necessary to a thorough investigation and resolution of the questions before it. However, it should use its authority under 10 CFR 2.757 to prevent any undue delay to the proceeding resulting from any cross-examination not required for the full and true disclosure of the facts or from other sources mentioned in that section.

The provisions for pre-hearing discovery set forth in 10 CFR 2.740-2.742 shall apply to this proceeding. Furthermore, in

several locations, including the Commission's Public Document Room and the TMI Local Document Room in Harrisburg, the Commission will maintain and continuously update a compilation of all publicly available information on the Three Mile Island accident and related matters, and it will also permit informal access to NRC staff considerations of the issues involved in this hearing in the manner in which such access is permitted in reactor licensing proceedings. It shall be an adequate response to any discovery request to state that the information or document requested is available in the public compilation and to provide sufficient information to locate the document or information. Moreover, as provided by 10 CFR 2.740(c) and 10 CFR 2.740(d), the Licensing Board may and should, when not inconsistent with fairness to all parties, limit the extent or control the sequence of discovery to prevent undue delay or imposition of an undue burden on any party.

The subjects to be considered at the hearing shall include:

(1) Whether the "short term actions" recommended by the Director of Nuclear Reactor Regulation (set forth in Section II of this Order) are necessary and sufficient to provide reasonable assurance that the Three Mile Island Unit 1 facility can be operated without endangering the health and safety of the public, and should be required before resumption of operation should be permitted.

(2) Whether the "long-term actions" recommended by the Director of Nuclear Reactor Regulation (set forth in Section II of this Order) are necessary and sufficient to provide reasonable assurance that the facility can be operated for the long term without endangering the health and safety of the public, and should be required of the licensee as soon as practicable.

As to the issue of financial qualifications mentioned above, a party wishing to raise this subject as a contention must clearly indicate why the licensee's financial condition might undermine the licensee's ability to operate the plant safely. Parties

raising this issue should do so before the Special Prehearing Conference.

While real and substantial concern attaches to issues such as psychological distress and others arising from the continuing impact of aspects of the Three Mile Island accident unrelated directly to exposure to radiation on the part of citizens living near the plant, the Commission has not determined whether such issues can legally be relevant to this proceeding. Any party wishing to raise such subjects as contentions, or as aspects of separate contentions, should brief the Atomic Energy Act and National Environmental Policy Act issues he believes appropriate to the Board as part of the contention acceptance process set out in the Commission's regulations. The Board should then certify such issues to the Commission for final decision prior to the issuance of its prehearing conference order pursuant to 10 CFR 2.752(c), either with or without its recommendation on such issues, as it deems appropriate under the circumstances. At the time the Commission reaches a decision on these issues, it will also consider whether it can and should grant financial assistance to parties seeking to raise these issues in this case.

Satisfactory completion of the required actions will be determined by the Director of Nuclear Reactor Regulation. However, prior to issuing its decision the Board shall have authority to require staff to inform it of the detailed steps staff believes necessary to implement actions the Board may require and to approve or disapprove of the adequacy of such measures. With respect to any uncompleted items the Board shall have authority similar to that provided in 10 CFR 50.57(b) to take such actions or to impose such limitations or conditions as it believes necessary to protect the public health and safety: Provided, that, as provided elsewhere in this order, restart shall not be permitted until satisfactory completion of all uncompleted short-term actions. Any affirmative determination by the Director will be based upon his finding that the actions specified by the Board, or by the Commission on review, have been taken, that the specified implementing

procedures employed are appropriate, that the licensee satisfies the financial qualification criteria imposed on an applicant for an operating license, and that there is reasonable assurance that the facility can safely resume operation.

As noted above, the Atomic Safety and Licensing Board should accord priority to the consideration of matters relating to the need for continued suspension of operating authority. Within the limitations of 10 CFR 50.59 and 2.717(b) of the Commission's regulations, the licensee may commence modifications, such as those recommended above by the Director of Nuclear Reactor Regulation, during the pendency of this proceeding at its own risk.

VI.

If the Licensing Board should issue a decision authorizing resumption of operation upon completion of certain short-term actions by the licensee and a finding that in its judgment the licensee is making reasonable progress toward completion of the long-term actions specified in this order as to which the Commission has issued immediately effective orders against other licensees, and subsequently if staff certifies that those short-term actions have been completed to its satisfaction, the Commission will issue an order within 35 days after such certification deciding whether the provision of this order requiring the licensee to remain shut down shall remain immediately effective. Any motions relating to the lifting of immediate effectiveness must be received by the Secretary of the Commission within 10 days of issuance of the certification, and any responses to such motions must be received by the Secretary 7 days later. The Commission shall issue an order lifting immediate effectiveness if it determines that the public health, safety or interest no longer require immediate effectiveness. The Commission's decision on that question shall not affect is [its] direct appellate review of the merits of the Board's decision.

VII.

By September 4, 1979, the licensee may file a written answer to this Order and any person whose interest may be affected by this proceeding may file a written petition to intervene. Petitions for leave to intervene must be filed in accordance with the Commission's Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. If a petition for leave to intervene is filed by the above date, the Atomic Safety and Licensing Board established by this Order will rule on the petition and issue an appropriate further order. An order wholly denying a petition for leave to intervene shall be appealable by the petitioner to the Commission itself within ten days after service of the order. An order granting a petition for leave to intervene shall be appealable to the Commission itself by a party other than the petitioner on the question of whether the petition should have been wholly denied.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors:

(1) the nature of the petitioner's right under the Atomic Energy Act to be made a party to the proceeding;

(2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and

(3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest.

The petition should identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene.

Not later than fifteen days prior to the first prehearing conference scheduled in the proceeding, the petitioner shall file a supplement to the petition to intervene which must include a

list of contentions which are sought to be litigated in the matter, and the bases for each concern set forth with reasonable specificity. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

An answer to this Order or petition for leave to intervene should be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Section, or may be delivered to the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. by September 4, 1979. A copy of the petition should be sent to the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 and to Mr. George F. Trowbridge, Shaw, Pittman, Potts and Trowbridge, 1800 M Street, N.W., Washington, D.C. 20036, attorney for the licensee. Any questions or requests for additional information regarding the content of this Notice should be addressed to the Chief Hearing Counsel, Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Nontimely filings of petitions for leave to intervene, amended petitions or supplemental petitions will not be entertained absent a determination that the petitioner has made a substantial showing of good cause for the granting of a later petition. That determination will be based on a balancing of the factors specified in 10 CFR 2.714(a)(i)-(v) and 2.714(d).

VIII.

Copies of the following documents are available for inspection at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C. and are being placed in the Commission's local public document room at the State Library of Pennsylvania, Government Publications Section, Education Building, Commonwealth and Walnut Streets, Harrisburg, Pennsylvania 17126.

August 1 Commission Order

April 16 Ltr. Herbein to Denton (prior notice will be given before restart)

June 28 Ltr. Herbein to Denton (modifications to be completed before TMI-1 restart)

June 28 NRC Staff Meeting summary on TM-1 restart

NUREG-0578

I&E Bulletins 79-05A
79-05B
79-05C

FOR THE COMMISSION

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 9th day of August, 1979.

ATTACHMENT

Milestone	Time Consumed Days	Total Days Into Proceeding
Publication of Notice (Detailed Order)	0	0
Filing of Intervention Petitions	20	20
Answers to Petitions	15	35
Time for Amending Petitions and for Negotiations re Contentions	25	60
Time between filing Amended Petitions and Contentions and Special Prehearing Conference	15	75
Publication of Special Prehearing Conference Order	5	80
(Discovery begins)		
Discovery completed	60	140
During discovery period:		
-Objections to Special Prehearing Conference Order 10 days		
-Possible further refinement of contentions		
Prehearing Conference	—	140
Prehearing Conference Order	5	145
Filing of Testimony	20	165
(Assumes objections to prehearing Conference Order filed simultaneously)		
Begin Hearings	15	180
Complete Hearings	60	240
Filing of Proposed Findings	40	280
Reply to Proposed Findings	10	290
Decision by Board	45	335

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Docket No. 50-289 (Restart)

In the Matter of METROPOLITAN EDISON COMPANY, *et al.*, (Three Mile Island Nuclear Station, Unit No. 1)

PEOPLE AGAINST NUCLEAR ENERGY PRELIMINARY PLAN FOR PRESENTATION OF EVIDENCE ON PSYCHOLOGICAL DISTRESS

People Against Nuclear Energy (PANE) is in the early stages of developing the case that it will present on the issue of psychological distress. PANE has spoken to several potential expert witnesses and has investigated the various studies that have been or are now being done on the issue. On the basis of these discussions and investigations, PANE submits the tentative plan for presentation of evidence set out below.

PANE's case on psychological distress will consist of four parts: (1) evaluation of studies done by others on the psychological impacts of the accident, (2) presentation of a comprehensive study to be done by PANE's expert witnesses on impacts in the area within five miles of TMI, (3) testimony of individuals concerning their own experiences, and (4) the conclusions of PANE's expert witnesses concerning the psychological and community health impacts of the TMI Unit 2 accident and of the renewed operation of TMI Unit 1.

In addressing existing and ongoing studies PANE's experts will evaluate the quality of each study and how the study's conclusions relate to the particular issues in this case. They will also explain the additional information that is needed in order to reach valid conclusions on the issues before the NRC.

In order to provide that additional information and to assure that the interests of its members and their neighbors and

communities are considered, PANE expects to conduct a comprehensive evaluation of psychological and community health impacts in the area within five miles of the reactors. This will be accomplished either by canvassing large numbers of residents or by selecting a smaller number through a sampling process. The choice depends upon the resources available to PANE and upon the advice of PANE's experts. In either case, the study will involve thorough psychological evaluation through both standardized testing and intense individual interviews. In addition, PANE will present evidence concerning property values, population changes, vandalism, business decline, and other indicia of community health.

The third part of PANE's presentation will be the testimony of area residents about their experiences since the accident and their reactions to the possible renewed operation of TMI Unit 1. These witnesses will provide the Licensing Board with a representative sample of the psychological effects found by the various studies and by PANE's experts.

Finally, PANE's experts will discuss their conclusions concerning both the long and short-term psychological and community health impacts of the accident itself and of the proposed restart of TMI Unit 1.

In presenting this plan, PANE emphasizes that it is tentative and may change significantly before the hearing begins. The Report of the President's Commission on the Accident at Three Mile Island, which includes a study on behavioral impacts of the accident, has only just been released, and other studies have not yet been completed. In addition, PANE has not been able to finalize arrangements with expert witnesses because the Commission has not yet decided to consider these

issues. For that reason, this can only be considered as a tentative outline of PANE's presentation.

Respectfully submitted.

/s/ William S. Jordan, III
WILLIAM S. JORDAN, III

/s/ Karin P. Sheldon
KARIN P. SHELDON
SHELDON, HARMON & WEISS
1725 I Street, N.W.
Suite 506
Washington, D.C. 20006
(202) 833-9070

DATED: November 2, 1979

11 NRC 297 (1980)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Ivan W. Smith,, Chairman
Dr. Walter H. Jordan
Dr. Linda W. Little

Docket No. 50-289
(Restart)

In the Matter of

METROPOLITAN EDISON COMPANY

(Three Mile Island Nuclear Station, Unit No. 1)

February 22, 1980

Responding to the direction of the Commission that the Licensing Board certify to it, prior to issuance by the Board of a prehearing conference order pursuant to 10 CFR 2.752(c), any contentions raised by the parties relating to issues such as psychological distress arising from the impacts of the TMI-2 accident, the Licensing Board refers to the Commission the various contentions raised and the briefs submitted by the parties on the matter. In its certification, the Board concludes that the Commission, within its discretion, may and should consider psychological stress and community fears under NEPA for the purpose of mitigating the effects of its TMI-1 licensing activity.

CERTIFICATION TO THE COMMISSION ON PSYCHOLOGICAL DISTRESS ISSUES

I. Background

In its Order and Notice of Hearing dated August 9, 1979 the Commission stated that it had been unable to determine whether issues such as psychological distress arising from the impacts of the TMI 2 accident can be relevant to this proceed-

ing. Parties wishing to raise such issues were invited to brief these issues to the Licensing Board under the Atomic Energy Act and National Environmental Policy Act. The Board was directed to certify the matter of [to] the Commission, ". . . either with or without its recommendation on such issues . . ." before the Board's prehearing conference order pursuant to 10 CFR 2.752(c). The Commission also stated that it would consider whether it can or should grant financial assistance to parties seeking to raise these issues. 10 NRC 141, 148. *Federal Register* 47821, 47824, August 15, 1979.

The board provided for the filing of psychological stress contentions and briefs and we requested preliminary plans for the presentation of evidence on psychological issues.[1] Subsequently seven intervenors filed psychological stress contentions.[2] The Commonwealth of Pennsylvania and four intervenors filed briefs favoring psychological stress issues[3] and two intervenors filed preliminary plans for the presentation of

---

[1] Memorandum and Order Ruling on Petitions and Setting Special Prehearing Conference, September 21, 1979, pp. 23, 24. Subsequently two intervenors objected to the request for a preliminary plan for psychological evidence. The Board removed any deadline for the filing of preliminary evidence plans, explained that it was an invitation to the parties, not an order, and we explained the purpose of the request. Memorandum and Order on Motions to Modify, October 16, 1979.

[2] People Against Nuclear Energy (PANE) Contentions Nos. 1 and 2; Newberry Township TMI Steering Committee, *et al.* (Newberry Intervenors) Contentions Nos. 1 and 2; Three Mile Island Alert, Inc. (TMIA) Contentions Nos. 3 and 8; Environmental Coalition on Nuclear Power (ECNP) Contention No. 6; Chesapeake Energy Alliance (CEA) Contention No. 4; Steven Sholly Contention No. 12; Aamodts Contention No. 9.

[3] Commonwealth's brief, October 4, 1979, PANE's main brief, October 22, 1979, Newberry Intervenors, brief, October 19, 1979. In addition, TMIA's petition to intervene, September 12, 1979, p. 7, and Mr. Sholly's Supplement to petition to intervene, pp. 38-40, October 22, 1979 contain arguments on the issue.

psychological stress evidence.[4] The licensee and the staff each filed briefs opposing issues of psychological stress.[5] PANE filed a brief in reply to the briefs of licensee and staff and filed a request for financial assistance to support intervention on psychological issues.[6] All of the relevant contentions and briefs by the parties are appended. The briefs of the Commonwealth, PANE, licensee and staff are extensive and together they present a reasonably thorough discussion of the issues. In our view they include the points made by intervenors Newberry, TMIA, and Mr. Sholly whose briefs were short and rather summary.

II. Summary of Certification

In this certification the board directly refers the briefs of the parties to the Commission. We do not brief again the issues; our discussion is limited to areas where we believe the briefing by the parties fell short of a complete discussion of the relevant considerations. We also make a recommendation and some observations about this particular proceeding. The staff's brief is a well-organized and reasoned presentation. Although we disagree with some of the staff's conclusions, we have used it as the foundation for our comments.

Below we state that psychological stress is probably not cognizable under the Atomic Energy Act but that the Commission might conclude to the contrary for reasons not discussed by the parties. We believe that NEPA permits the NRC to consider community fears. We recommend that we be permit-

---

[4] Newberry Intervenors' preliminary plan, October 22, 1979. PANE preliminary plan, November 2, 1979.

[5] Staff brief, October 31, 1979, Licensee opposition brief, October 31, 1979.

[6] PANE's reply brief, November 7, 1979, PANE's request for financial assistance, November 29, 1979. In addition, on February 1, 1980, PANE filed a request for an expedited decision on its request for financial assistance.

ted to include such issues in this proceeding for the purpose of directly reducing the causes of psychological stress; for example, by improving the dissemination of accurate and trusted information. We do not make a recommendation that psychological stress be factored into a full cost/benefit balancing in an Environmental Impact Statement (EIS) because *inter alia* we can identify no basis to believe that it can be done in this case. We were not invited to make a recommendation on intervenor funding, and we make none. However, we comment briefly on the possible use of intervenor funding in this proceeding.

III. Psychological Stress Under The Atomic Energy Act

PANE is the only intervenor to argue that psychological stress is a consideration of "public health and safety" within the purview of the Atomic Energy Act (PANE's main brief, pp. 3-7; reply brief, pp. 3-5). Staff and Licensee each argue that the Act does not encompass any consideration of public health other than health relating to radiation hazards (Staff brief, pp. 3-8; licensee brief, pp. 3-10). The parties discuss *State of New Hampshire* v. *Atomic Energy Commission*, 406 F.2d 170 (1st Cir. 1969), *cert. denied*. 395 US 962 (1969) and *Consolidated Edison Company of New York* (Indian Point, Unit 1) 3 AEC 62 (1965). These cases held that the possible effects of water heated by radiation were not hazards included in the Commission's responsibility to protect the health and safety of the public. The legislative history cited by the staff and licensee also support the view that only radiation hazards are to be considered under the Act. We can identify no law to the contrary.

However, the discussion is incomplete without the observation that, in this case, the intervenors are asserting that radiological hazards associated with accident conditions are affecting mental health. This is to be compared to pollution effects deriving from water heated by radiation in normal operation. This is a case of first impression not specifically addressed by the cited legislative history nor in *New Hampshire* or *Consolidated Edison, supra*. As such, the Commis-

sion's judgment as to whether the alleged health effects fall within the Atomic Energy Act would be entitled to deference. This was the view of the First Circuit in *Public Service Company of New Hampshire* v. *NRC*, 582 F.2d 77 (1978), where the court held:

> In a regulatory scheme where substantial discretion is lodged with the administrative agency charged with its effectuation, it is to be expected that the agency will fill in the interstices left vacant by Congress. *See Phillips Petroleum Company* v. *Wisconsin*, 347 U.S. 672, 74 S.Ct. 794, 98 L.Ed. 1035 (1954); *Henry* v. *FPC*, 168 U.S. App. D.C. 137, 144, 513 F.2d 395, 402 (1975). The Atomic Energy Act of 1954 is hallmarked by the amount of discretion granted the Commission in working to achieve the statute's ends. The Act's regulatory scheme "is virtually unique in the degree to which broad responsibility is reposed in the administering agency, free of close prescription in its charter as to how it shall proceed in achieveing the statutory objective." *Siegel* v. *AEC*. 130 U.S. App. D.C. 307, 312, 400 F.2d 778, 783 (1968). The agency's interpretation of what is properly within its jurisdictional scope is entitled to great deference, *Power Reactor Company* v. *Electricians*, 367 U.S. 396, 408,81 S.Ct. 1529, 6 L.Ed.2d 924 (1961); *Nader* v. *NRC*, 168 U.S. App. D.C. 255, 265-66, 513 F.2d 1045, 1055-56 (1975), and will not be overturned if reasonably related to the language and purposes of the statute. *Hardin* v. *Kentucky Utilities Company*, 390 U.S. 1, 8, 88 S.Ct. 651, 19 L.Ed.2d 787 (1968); *NLRB* v. *Hearst Publication*, 322 U.S. 111, 131, 64 S.Ct. 851, 88 L.Ed. 1170 (1944); *Bangor and Aroostock Railway Company* v. *ICC*, 574 F.2d 1096, 1104 n.8 (1st Cir. 1978).

Id. p. 82.

In *Public Service Company* (a phase of the famous *Seabrook* proceeding), the court was referring not only to the Commission's discretion under the Atomic Energy Act but also to the deference due the Commission's "interpretation of what is properly within its jurisdictional scope" under NEPA. *Ibid.* We again address the Commission's discretion under NEPA below.

IV. Psychological Stress Is Cognizable Under NEPA

The parties opposing the view that psychological stress may be considered under NEPA do so on three major bases: 1) The requisite nexus of a direct physical environmental impact to the psychological stress is not present, 2) psychological stress is not measurable, thus cannot be counted under NEPA, and 3) even if psychological stress were to be measurable, it cannot be considered in the asserted absence of a rational basis for the effect. We discuss each of these considerations in the order of the Staff's discussion (Staff brief, pp. 29-50).

A. Direct Physical Impact is Required

In its brief the staff acknowledges that certain types of "social" or "indirect" impacts must be considered under NEPA but only when it has first been demonstrated that these indirect impacts are a result of a direct impact upon the physical environment (pp. 30-41). In support of this position the staff refers to the Act itself (p. 31), the legislative history (pp. 31-33) a line of court decisions (pp. 34-39) and the Council of Environmental Quality regulation, 44 CFR 1508.14, (pp. 39-41).

There is no closely analogous portion in the licensee's brief but the concept is related to the licensee's discussion of its view that the *bases* for community fears must be addressed, not the *fears* themselves. (e.g. pp. 31-33) This view is more appropriately considered below under our discussion of whether psychological stress must be rationally based before it may be considered. Neither the intervenors nor the Commonwealth discuss staff's "direct physical impact" argument. Even though PANE's reply brief addressed most of the staff's objections to psychological issues, it did not reply to the "direct physical impact" argument (p. 6).

The cases relied upon by the staff in its "direct physical impact" argument are representative of those involving a direct socio-economic impact not based on a significant physical impact upon the environment. Typically in these cases the

armed forces undertake to close, relocate, or reduce operations at a military facility with a result [resulting] loss of jobs or other adverse economic effect upon the surrounding community (*e.g. Breckinridge* v. *Rumsfield*, 537 F.2d 864 (6th Cir. 1976), *cert. denied* 429 U.S. 1061 (1977), Staff Brief, pp. 34-38. In another case, *Monarch Chemical Works, Inc.* v. *Exxon*, 466 F.Supp. 639 (D. Neb., 1979), the court held that since a correctional facility would have no significant primary effect, consideration of socio-economic effects was not required. The CEQ regulation, 10 CFR 1508.14, provides that social effects in themselves do not require an EIS, but must be considered when interrelated with natural or physical environmental effects.

Since no one else has done so it is necessary for us to point out that these cases are irrelevant to this proceeding. The psychological stress alleged by the intervenors here is related to a significant physical environmental impact: the operation of TMI 1 coupled with residual effects of the accident at TMI 2. It does not matter, as staff argues, that there has been a cost/benefit balancing in a full-scale EIS for TMI 1 and the construction and operation was found to be justified (pp. 9-14) or that this is a narrowly scoped proceeding. The very fact that an EIS and cost/benefit balancing was required is a recognition of the fact that the operation of TMI 1 involves a significant physical impact upon the environment.

B. Psychological Stress is Sufficiently Quantifiable

The staff (pp. 43-47) and other parties cite five Circuit Court cases to the effect that community fears and psychological stress are not cognizable under NEPA primarily because they are not amenable to quantification: *Hanly* v. *Mitchell*, 460 F.2d 640 (2d Cir. 1972), *cert. denied*, 409 U.S. 990 (1972) *(Hanly I); Hanly* v. *Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) *(Hanly II): Maryland-National Capital Park and Planning Commission* v. *U.S. Postal Service*, 487 F.2d 1029, 1037-38 (D.C. Cir. 1973); *First National Bank of Chicago* v. *Richardson*, 484 F.2d 1369, 1375 (7th Cir. 1973); and *Nucleus of Chicago Homeowners Associa-*

tion v. *Lynn*, 524 F.2d 225 (7th Cir. 1975) *cert. denied*, 424 U.S. 967 (1976).[7]

The quantifiability cases are the focal point of the most vigorous debate among the parties and this sub-issue is extensively discussed by all those briefing the issue. Licensee brief, pp. 13-29; PANE main brief, pp. 16-21; PANE reply brief, pp. 9-12; Commonwealth brief, *passim*, Newberry Intervenors' brief, pp. 2-4.

The intervenors, particularly PANE and Newberry Intervenors, discuss in their filings how psychological stress may be measured in individuals and in the community. The discussion frequently is based upon tort *liability*, thus, to some extent, it becomes digressive. But addressing the *measurability* of psychological stress in terms of torts [is] relevant to the limited use recommended by the board below. The staff acknowledges that some quantification of stress upon the community is being undertaken by responsible organizations. Staff brief, p. 53, n. 51. Although we discuss the possible uses of this information below, we have nothing to add to the parties' briefs on how to measure psychological stress.[8]

However the consideration of whether psychological stress is sufficiently quantifiable to be considered under NEPA should also include several factors not addressed by the parties.

Precise numerical quantification is not necessary. The NRC regularly considers the aesthetic effects of its licensing actions

---

[7] *But See Chelsea Neighborhood Association* v. *U.S. Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975).

[8] Except that we might note that it is premature to expect parties to describe now the details of their expected evidence. The intervenors have, in our view, established a sufficient prehearing basis for the premise that the effects are measurable. To permit this evaluation is why we invited preliminary plans for the presentation of evidence on psychological stress, n. 1, *supra*.

upon the environment. Recently, the NRC staff concluded in *Greene County Nuclear Power Plant* that the proposed nuclear plant would have an unacceptable aesthetic impact upon the environment surrounding the proposed plant. Final Environmental Statement (FES),NUREG-0512, January 1979, p. IV., Sec. 5.7. The staff's non-numerical measurement of the Greene County plant's aesthetic impact has apparently eliminated the proposed site; the applicant has not challenged the staff's findings. The licensing board in *Public Service of New Hampshire, et al.*, (Seabrook Station, Units 1 and 2), 6 NRC 816, 826, in a finding later mooted, measured the aesthetic impacts of cooling towers for the Seabrook facility. *Id.* at 826.

In a later phase of that same proceeding, the First Circuit in *Public Service Company, supra*, found that the NRC was well within its discretion in requiring the rerouting of transmission lines, in part, to avoid a "visual insult" to the relatively pristine area involved (582 F.2d at 80).

Another point not adequately briefed is that, in the quantifiability cases argued by the parties, no mention is made of the posture of the cases there compared with here. In the *Hanly* cases, *supra*, *Maryland National Capital Park and Planning Commission, supra; First National Bank of Chicago, supra; Nucleus of Chicago Homeowners, supra;* and virtually every other case discussed by the parties concerning the requirements of an EIS, the Federal agency has been sued for an asserted failure to comply with the provisions of NEPA. But in *Public Service Company, supra*, the NRC was challenged by the utility for exceeding the requirements of NEPA. In this unusual, perhaps unique situation, the exercise of the agency's discretion in affirmatively protecting the environment was ringingly supported by the court. *See* citation, pp. 5, 6, *supra* and 582 F.2d at 82.

Still another aspect of the quantifiability subissue not adequately addressed by the briefing parties is the nature of the impacting force. In the *Hanly* line of cases, and those following, the courts were confronted with the argument that the

mere presence of a disadvantaged group of people could constitute a pollution to the environment of a higher socio-economic group. The term "people pollution" was disparangingly [*sic*] coined by Judge Leventhal of the D.C. Circuit in *Maryland National Capital Park and Planning Commission*, *supra*, 487 F.2d, at 1037. The D.C. Circuit refused to accept a factor with such strong racial and class overtones as a consideration of national environmental policy. The Seventh Circuit in *Nucleus of Chicago Homeowners Association*, 524 F.2d at 231, cited with approval the D.C. Circuit refusal. See also *Como-Falcon Coalition* v. *Department of Labor*, 465 F.Supp. 850, 857, n. 2 (D.Minn. 1978). In our proceeding of course there are no overriding national policies preventing the frank acknowledgment that the presence of the impacting force (operation of TMI 1) in itself may be considered in mitigation of its effects, which brings us to the next area of dispute among the parties.

C. Rational Basis for Community Fears

The licensee to a greater extent (brief, pp. 20-25) and the staff to a lesser extent (pp. 44-46) argue that, even if psychological stress to the community is measurable, it is not cognizable under NEPA if the fears are not justified. Both cite *First National Bank of Chicago*, *supra*, where the court held:

> . . . we question whether such factors, [psychological and sociological effects upon neighbors] even if amendable [*sic*] to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized.

484 F.2d at 1380 n. 13.

From this ruling, licensee argues that *First National Bank* provides explicit support for the proposition that unsubstantiated fears or unfounded psychological effects are not cognizable under NEPA (Licensee brief, p. 22). Neither PANE, the Commonwealth, nor any other intervenor directly addresses this view of NEPA, so we must.

First, "clear and convincing" is a standard for the measurement of proof, the quantity and quality of evidence; its use in *First National Bank*, certainly was not intended to be a carefully considered evaluation of evidentiary standards.

More important is the fact that the scheme of nuclear energy regulation assumes that commercial energy reactors are inherently dangerous but potentially safe. Why else does the Commission consider remote siting of nuclear plants and ten mile plume emergency planning zones? For that matter, why else are there an Atomic Energy Act and the NRC? The TMI 2 Lessons Learned Task Force Final Report states that "probably" the single most important human factor with which the nuclear industry and NRC must contend is the "mind set that future accidents are impossible." NUREG-0585, 1979, p. 2-7.

We urge the Commission to reject out-of-hand the arguments that the Commission should ignore community fears of TMI 1 operation because of the assertion that those fears are irrational. These fears differ from the fears produced by low income housing, and they are more amenable to mitigation as we discuss below.

D. Environmental Impact Statement

In sum the staff's position is that the issue of psychological stress should be considered under the umbrella of a need *vel non* of an environmental impact statement. Staff brief pp. 9-29.[9] The staff argues that an EIS is not required, but even if it were required, psychological stress is probably not cognizable under NEPA. But, according to the staff, maybe it is cogniz-

---

[9] The staff has elected to address the issue of the need for an EIS in its psychological stress brief. The other parties have raised the EIS issue with respect to other sub-issues in briefs not before the Commission. The question of the need for a general EIS is pending before the board.

able. If it is a question of quantifiability, the staff's reasoning continues, it is the NRC's responsibility under NEPA to:

> (B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

Section 102(2)(B); 42 USC 4332 (B). Staff brief, pp. 9-29, 51-56.

Recognizing that NEPA may require the staff to develop the methods (with CEQ) to quantify "presently unquantified environmental amenities" the staff then reports:

> Further, the NRC Staff has not had the opportunity and does not presently have the expertise to make more than a cursory evaluation of the methodology of these studies. Consequently, we cannot say with any degree of certainty whether the psychic distress associated with continued operation of the TMI 1 facility is sufficiently susceptible of measurement to permit a meaningful assessment of the phenomenon. [footnote omitted]

The staff refers to a sizeable group of studies by responsible organizations attempting to measure the effect of the TMI 2 accident on mental health (Brief, p. 53 n. 51) and other efforts to reconcile mental health with NEPA *(Id.*, p. 54, n. 53). But its ultimate conclusion is that psychological stress should not be considered in this proceeding. *Id.*, p. 56.

We have examined the filings of the parties, the studies referred to by the staff, and other literature.[10] We cannot

---

[10] For example, (1) Gleser, G. C.; Green, B. L.; and Winget, C. N. 1978. "Quantifying Interview Data on Psychic Impairment of Disaster Survivors." *Journal Nervous and Mental Disease, 166(3)*, 209-216; (2) Quarantelli, E. L., and Dynes, R. R. 1977. "Response to Social Crisis and Disaster." *Annual Review of Sociology*, 3, 23-49 (a review of the state-of-the-art of disaster psychology/sociology, with a bibliography of more than 100 references; (3) Quarantelli, E. L.

identify a source of evidence which would permit the measurement of the psychological stress phenomenon well enough for use in a full-scale cost/benefit balancing in an EIS. Nor do we know whether or not the state of the art can now produce such evidence. Although the intervenors refer to the community fears as well as individual fears, the intervenors have no more resources or expertise than does the staff to produce evidence useful in a full-scale cost/benefit balancing.

Only the staff has the resources and opportunity to develop the methodology to produce such evidence. Whether the staff should be directed to develop the methodology to quantify psychological stress for use in an EIS is a matter between the Commission and the staff. The board has no recommendation.

E. Mitigation under NEPA

It was appropriate for the staff to discuss psychological stress first in terms of an EIS, but the staff erred in limiting its analysis to whether an EIS factoring psychological stress is required.

Aside from its fundamental threshold position, the staff seems to take the position that, even if psychological distress is cognizable under NEPA, the Commission cannot consider it because it does not have the skills and resources to factor it precisely into an EIS. Thus, it would seem, the staff is arguing that, if the Commission cannot do a complete job, it should do nothing at all. We disagree. We believe that NEPA permits the NRC, within its discretion and *without an EIS*, to consider community and individual fears, and to take reasonable actions to mitigate these fears.

It is true that the NRC usually considers environmental impacts in the course of issuing an EIS or environmental

---

(ed.), 1978, *Disasters: Theory and Research*, Sage Studies in International Sociology 13. Journals include *Mass Emergencies: An International Journal of Theory, Planning, and Practice* and *The International Journal of Disaster Studies and Practice*.

impact appraisal under Section 4332(C). Sometimes the evaluation is under subsection (E) requiring the consideration of alternatives.[11] But solely because an action otherwise required by NEPA does not fall neatly into the specific mandates of Section 4332 (A) through (I), does not, in our view, prevent the Commission from exercising its general authority and responsibilities under NEPA.

In Section 4332:

> The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, . . .

The policies referred to are those set forth under Section 4331(b) including:

> (2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
>
> (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
>
> (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; . . .

These general provisions of NEPA provide the Commission with the authority to take reasonable action to protect the environment even where an EIS is not required, or as it may be

---

[11] Section 4332 (E) requires agencies to ". . . study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources; . . ."

We do not depend upon this subsection because we believe that the Commission's authority to protect the environment is much more fundamental.

in this case, not possible. In a review of NRC and AEC decisions we have been unable to find specific authority for our view. The cases, as we noted above, have been under circumstances where the impact has been deemed sufficient to trigger an EIS under Section 4332(C) (or a negative statement supporting an environmental impact appraisal). However there is no trend that we can identify in Commission-NEPA precedents inconsistent with our recommendation. The conditioning of licenses has not been dependent upon whether, in a cost/benefit balancing, the overall balance was tipped. In *Detroit Edison Company* (Greenwood Energy Center, Units 2 and 3) ALAB-247, 8 AEC 936, 944-45 (1974), the Appeal Board discussed the relationship between the Commission's authority to condition licenses and the final balancing under NEPA:

> Nor is the Commission's authority restricted, as the applicant would have it, to voting the license up or down depending on whether the overall "cost/benefit ratio" is tilted against the facility by the location of its transmission lines. On the contrary, under NEPA, an agency is also obliged to minimize to the extent reasonably practicable the environmental aftermath of its actions. *Environmental Defense Fund* v. *Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974); *Environmental Defense Fund* v. *Froehlke*, 473 F.2d 346, 353 (8th Cir. 1972); Council on Environmental Quality Guidelines, 40 CFR Section 1500.2(b) (1974 rev.). [Footnote omitted] As the District of Columbia Circuit has succinctly put it:
>
> > Clearly, it is pointless to 'consider' environmental costs without also seriously considering action to avoid them. [*Calvert Cliffs, supra*, 499 F.2d at 1128.]
> >
> > Our own decisions reflect that understanding. We have held that NEPA requires nuclear facilities to be designed to minimize environmental harm to the extent reasonably practicable before the final balance is struck. The cooling tower cases are a clear example. We have reiterated in those decisions that the relative environmental merits and costs of the various cooling systems be evaluated for each facility to insure "that the optimum alternative may be selected" before "[f]inally, an overall balancing of costs and benefits occurs . . ."

> [Citations omitted] It would overturn those decisions to rule in this case that environmental damage which can be avoided at reasonable cost is nonetheless permissible, provided only that the ultimate, overall cost/benefit ratio remains favorable to a nuclear plant. Such a result is unwarranted; it would devitalize NEPA. We are neither prepared nor empowered to inter that Act.

Id. at 444-45.

In *Public Service Company, supra,* the First Circuit described the reach of NEPA quite simply:

> The directive to agencies to minimize all unnecessary adverse environmental impact obtains except when specifically excluded by statute or when existing law makes compliance with NEPA impossible.

582 F.2d at 81.

As we noted, the board, if permitted, would consider psychological stress for the purpose of mitigating community fears about the operation of TMI 1. The licensee notes throughout its brief that the correct way to address community fears is to remove the bases for them (Licensee's brief, e.g., pp. 18, 23, 30-33). Certainly it is true that the best way to minimize any psychological stress in the communities around TMI 1 is to make the plant safe or not allow it to operate. We do not need further authority from the Commission to approach community fears in this manner. What we may need is the jurisdiction to impose reasonable, cost-effective conditions on the operation of TMI 1 directly, and perhaps solely, for the purpose of mitigating psychological stress. For example, if the record should demonstrate that the licensee has complied with the law, regulations and reasonable standards of public health and safety in its radiological monitoring program, but that, say, additional continuous off-site monitoring visible by the residents around the facility would reduce apprehension in the community, and, in a minicost/benefit balancing, it is found to

be reasonable, we should have the authority under NEPA to require this amenity.[12]

Further, the opportunity for the public in the vicinity of TMI to express through the NRC hearing process their fears and ideas for the alleviation of their fears can in itself have a substantial mitigating impact in the resolution of any residual psychological stress from the accident, and the proposed restart of TMI 1. On the other hand, to conclude summarily that these fears are baseless and therefore beyond NRC jurisdiction, as urged by the licensee, may produce additional stress in that the public may perceive an attitude that their fears are of no consequence, and that, therefore they have no control over, or voice in the events affecting them.[13]

Even if the Commission does not permit the consideration of psychological stress issues as such, these issues may collaterally relate to other issues which must be considered in the proceeding. Community fears may be a factor in evaluating the effectiveness of the licensee's emergency response plan. The licensee's sensitivity to community fears and licensee's credibility may indirectly relate to its management capability to formulate and implement emergency response plans. Conversely, the effectiveness of plans may rest on the public's education, its preparation to take action and its confidence in the plans. To the extent that psychological stress may be a factor in these other issues, we do not believe that additional authority from the Commission is required. We are seeking only the authority to address directly and to mitigate fears which may result from the proposed operation of the facility.

---

[12] This example has no record basis. We use it solely as an illustration. It is, however, an area of interest to the board which may deserve examination.

[13] Titchener, J. L. and F. T. Kapp, 1976. "Family and Character Change at Buffalo Creek." *American Journal Psychiatry, 133*(3), 295-299; Lifton, R. J. and E. Olson, 1976. "The Human Meaning of Total Disaster: The Buffalo Creek Experience." *Psychiatry, 39*, 1-18.

The board would not anticipate a parade of witnesses describing their personal experiences during the TMI 2 accident and their concerns about restarting TMI 1.[14] This approach would soon become cumulative and, in any event, would be of doubtful value. It would provide little information beyond what the board has already observed during the public limited appearances. As we noted above, the staff's brief contains references to studies which may be valuable and individual intervenors have indicated their plans to approach the issue on a broader, more analytical level.

V. Intervenor Funding

The Commission has not invited the board's recommendation on the issue of financial assistance to intervenors. While we do have views on the subject, they are individual and philosophical, and not likely to be helpful to the Commission. Our only comment on intervenor assistance is that there are intervenors and attorneys in this proceeding who have the skills to use intervenor funds effectively. One intervenor, PANE, has submitted a plan for the use of intervenor funds which warrants consideration if the Commission determines to provide intervenor assistance (p. A-133).

---

[14] The Consumer Advocate of Pennsylvania has submitted an instructive brief addressing the potential problems of stress caused to witnesses testifying on this subject (p. A-28).

VI. CONCLUSION

The Nuclear Regulatory Commission, within its discretion, may and should consider psychological stress and community fears under NEPA for the purpose of mitigating the effects of its TMI 1 licensing activities.

Respectfully submitted,

THE ATOMIC SAFETY AND
LICENSING BOARD
WALTER H. JORDAN
LINDA W. LITTLE
IVAN W. SMITH, Chairman

Bethesda, Maryland,
February 22, 1980

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

MAR 27 1981

Docket No. 50-289

MEMORANDUM FOR: James R. Tourtellotte, Assistant Chief Hearing Counsel, Office of the Executive Legal Director

FROM: Wm. H. Regan, Jr., Chief
Siting Analysis Branch
Division of Engineering

SUBJECT: TRANSMITTAL OF AN ENVIRONMENTAL IMPACT APPRAISAL RELATING TO THE PROPOSED RESTART OF THREE MILE ISLAND, UNIT 1

Enclosed is an Environmental Impact Appraisal relating to the proposed restart of Three Mile Island, Unit 1. This is the document which the Staff, through its legal counsel, stated would be prepared to analyze the environmental impacts likely to result if TMI-1 were allowed to restart.

This staff analysis has not led to the identification of any new environmental impacts or any significant changes in those identified previously. The Staff, therefore, recommends the issuance of a negative declaration.

/s/Wm. H. REGAN, JR.
Wm. H. Regan, Jr., Chief
Siting Analysis Branch
Division of Engineering

Enclosure:
As stated
cc: D. Muller

ENVIRONMENTAL IMPACT APPRAISAL BY THE DIVISION OF ENGINEERING EVALUATING THE PROPOSED RESTART OF THREE MILE ISLAND NUCLEAR STATION, UNIT 1

DOCKET NO. 50-289

ENVIRONMENTAL IMPACT APPRAISAL

I. Description of Proposed Action

Following the Three Mile Island Nuclear Station, Unit No. 2 accident on March 28, 1979, the U.S. Nuclear Regulatory Commission (Commission) ordered that the Three Mile Island Nuclear Station, Unit No. 1 (TMI-1), authorized to operate under Facility Operating License No. DPR-50 (held by Metropolitan Edison Company (the licensee)), remain in a cold shutdown condition until further order of the Commission. The Commission also stated that a hearing would be conducted prior to any restart of the facility. "Order" dated July 2, 1979.

On August 9, 1979, the Commission published an Order and Notice of Hearings (*Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-79-8, 10 NRC 141 (1979) which specified the basis for its concerns and procedures to govern further proceedings. This Order also appointed the members of an Atomic Safety and Licensing Board (Board) to conduct the required hearing.

Pursuant to the above Notice, several petitions to intervene were filed. During the First Special Prehearing Conference held by the Licensing Board on November 9, 1979, the Staff, through its legal counsel, stated that an environmental impact appraisal would be prepared which, if it revealed significant environmental impacts, would cause the Staff to issue either an environmental impact statement or a supplement to the earlier environmental impact statement prepared in conjunction with the initial licensing of the facility. If no significant impacts were found, the Staff would recommend the issuance of a negative declaration. (Tr. 373).

A review of the environmental effects of the proposed restart of TMI-1 has now been completed.[1] Based on this review, the staff concludes that there would be no significant environmental impacts beyond those previously identified and evaluated in the environmental impact statement prepared in conjunction with the initial licensing of the facility should TMI-1 be permitted to resume operation. The bases for this conclusion are set forth below.

II. Environmental Impact Of Proposed Action

The Staff's Final Environmental Statement (FES), relating to the operation of TMI-1 and TMI-2, was issued in December, 1972.[2] Based on its review, the Staff concluded that there would be several adverse environmental effects resulting from the operation of Units 1 and 2. These conclusions were documented in the FES and conditions were imposed on the licensee for the protection of the environment. An operating license, with environmental and other conditions attached, was issued for TMI-1 on April 19, 1974.[3]

In determining the potential effects of the proposed restart, the Staff re-examined the environmental impact of operation of

---

[1] The staff did not examine the psychological stress factor in its environmental review. The Atomic Energy Act of 1954, as amended, and the National Environmental Policy Act of 1969 do not require that such effects be analyzed in an environmental review. See Brief of NRC Staff on Psychological Distress Issues, October 31, 1979. Further, the Commission ruled on December 5, 1980 that psychological stress issues would not be heard in this proceeding. Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-80-39, 12 NRC ___ (1980).

[2] The FES was reprinted as Appendix B to the Final Supplement to the Final Environmental Statement related to operation of Three Mile Island Nuclear Station, Unit 2 (NUREG-0112) which was issued in December 1976. The FES was also reprinted as NUREG-0552 in April 1979.

[3] 39 *Fed. Reg.* 14623 (1974).

the TMI Station as discussed in the FES for Units 1 and 2.[4] This re-examination included an evaluation of whether previously identified environmental impacts would be changed in any way should restart be authorized. The impacts reported in the 1972 FES are restated below and are followed by the present staff evaluation of the impacts associated with the proposed restart.

A. Construction and Site Development.

In its 1972 FES for Units 1 and 2 the Staff stated that:

> "Construction and site development has and will cause some temporary disturbance of land onsite and of adjacent waters."

NUREG-0112 at B-1.

Present Staff Evaluation:

All construction relating to Unit 1 which would cause disturbance of land onsite and of adjacent waters is complete. No additional construction or site development relating to Unit 1 restart is occurring or will occur.

B. Liquid Effluents

In 1972 the Staff concluded that:

> "About 36,000 gpm of auxiliary service cooling water and blowdown from the cooling towers will be discharged to the Susquehanna River. This liquid effluent from the Station is approximately 5% of the minimum river flow. The effluent will average 3 degrees F or less above ambient river temperature depending on the season of the year. Following relatively infrequent reactor shutdowns during unusual weather conditions (high air and low water temperatures) the effluent could be as much as 19 degrees F above river ambient for periods not exceeding a few hours."

---

[4] The environmental impacts of TMI-1 and TMI-2 are summarized in Appendix B of NUREG-0112 (pages B-1 and B-2).

The Staff also found that "the thermal discharge of the Station to the Susquehanna River will have a negligible effect in terms of the present use of the river for recreation, municipal water supplies, etc." NUREG-0112 at B-41.

Present Staff Evaluation:

Recent reviews of thermal discharges from Three Mile Island and their effects on Susquehanna River aquatic resources have been performed for the 1977 Unit 2 OL hearing[5] and in connection with the 1979 Unit 2 accident.[6] Those reviews examined the facts of Unit 1 operation (1974-1977) and the operation of Units 1 and 2 (1978-1979).

Operation of the closed-cycle cooling system (two natural draft cooling towers plus one mechanical draft tower) at TMI Unit 1 results in effluent temperature being within only a few degrees of ambient river temperature and in many instances the thermal discharge has been unmeasurable a few meters (<5) from the point of discharge.[7] Effluent temperatures measured during Unit 1 reactor cooldown operations have been

---

[5] NRC Staff Response of C. R. Hickey, Jr. to Licensing Board's Question Relating to Aquatic Impacts. Before the USNRC Atomic Safety and Licensing Board, in the Matter of Metropolitan Edison Company, *et. al.* for Three Mile Island Nuclear Station, Unit 2., 50 p. following transcript page 988, May 2, 1977, Harrisburg, PA.

Affidavit of C. R. Hickey, Jr. dated December 6, 1977, on NRC staff's assessment of the Commonwealth of Pennsylvania's revised 401 Certification thermal effluent limitations. Submitted to the USNRC Atomic Safety and Licensing Board, In the Matter of Metropolitan Edison Company, *et. al.* for Three Mile Island Nuclear Station, Unit 2., 10 p.

[6] Hickey, C. R., Jr. and R. B. Samworth. Non-radiological consequences to the aquatic biota and fisheries of the Susquehanna River from the 1979 accident at Three Mile Island Nuclear Station. USNRC, NUREG-0596. November 1979.

[7] *Ibid.*

lower in ΔT (difference between effluent and ambient river temperatures) than the maxima discussed in the 1972 and 1976 environmental statements.[8] Therefore, the thermal effluents produced during station operation have not resulted in conditions different than previously analyzed. No fish-kills have resulted from operation of TMI.[9]

The spatial extent and size of the thermal discharge plume has been monitored as required by the Environmental Technical Specifications. The plume has been variable in downstream extent (0-1000 m long; or to about 0.6 mile), has been confined to very near the west shoreline of Three Mile Island (0-20 m), and to depths of about 3 m in the center channel of the river, which is approximately 1300 feet (~400 m) wide and 9 feet (~2.7 m) deep at flows of about 10,000 cfs. The 1000 m long and 20 m wide plume represents its maximum measured extent. Normally, the measurable plume has been much smaller and in many cases it has been unmeasurable at the point of discharge, due to effluent temperatures being very close to ambient river temperatures. The wide and shallow nature of the Susquehanna River results in low initial mixing of tributary waters with the river; thus the TMI thermal plume remains close to the shoreline as it moves downstream in the center channel. Even during its maximum size, the plume has been only a few degrees warmer than ambient, and has extended downstream to a point about halfway between the effluent discharge and the junction of Three Mile Island with the York Haven Dam. That

---

[8] *Ibid.*

[9] *Ibid;* NRC Staff Response of C. R. Hickey, Jr. to Licensing Board's Question Relating to Fish Kills. Before the USNRC Atomic Safety and Licensing Board, In the Matter of Metropolitan Edison Company, *et. al.* for Three Mile Island Nuclear Station, Unit 2., 18 p. following transcript page 988, May 2, 1977, Harrisburg, PA.

plume area is a relatively small portion of both the center channel and the river as a whole in the site vicinity.[10]

The most productive spawning and nursery areas of important fishes in the York Haven Pond are in the east and west river channels.[11] The areas of the pond fished most frequently by anglers are upstream of TMI and between Hill, Shelley, and Fall Islands (*i.e.*, the north and northwest portions of the pond).[12] Therefore, the thermal effluent from the nuclear station does not intercept or directly contact those important areas of the pond. In summary, operational monitoring has shown that thermal effluents have been within the limits of those predicted and analyzed during pre-operational NEPA reviews, and that impacts to river biota and fisheries have not occurred.

Thus, since operation of TMI-1 if restart is authorized will be in the same manner as previously evaluated, restart of TMI-1 will have minimal effects on the Susquehanna River biota and fisheries.

C. Evaporation

In its original analysis the Staff found that:

> "About 20,000 gpm of river water will be evaporated from the cooling towers."

NUREG-0112 at B-2. The Staff also stated that:

> "[r]emoval of water at this rate is not expected to have a significant effect on the water balance of the Susquehanna

---

[10] Hickey, C. R., Jr., and R. B. Samworth. Non-radiological consequences to the aquatic biota and fisheries of the Susquehanna River from the 1979 accident at Three Mile Island Nuclear Station. USNRC, NUREG-0596. November 1979.

[11] *Ibid.*

[12] Hickey, C. R., Jr. Assessment of the consequences to the recreational fishery of the Susquehanna River from the 1979 accident at Three Mile Island Nuclear Station. USNRC Draft NUREG-0754. December 1980.

River in the vicinity of the Station since this is a small perturbation of the normal seasonal variation of the river flow (see Section II.E)."

NUREG-0112 at B-40.

Present Staff Evaluation:

In 1977, the Staff was asked whether, in view of the operating experience at TMI-1, there were any changes in the water usage projections for TMI-2 as stated in the FES for Units 1 and 2.[13] At that time, the Staff stated that the figures for water usage previously presented in the FES (pages III-7 through III-11) were still applicable. There were no changes in the water use design values as a result of the operating experience at TMI-1.

To date, there have been no changes in the water use design values as reported in the FES and none are expected as a result of the restart of TMI-1. Because the projections for water evaporation remain unchanged, the above conclusion that water evaporation will not have a significant impact on the water balance of the Susquehanna River would continue to be valid should Unit 1 be allowed to resume operation.

D. Radioactive Releases

The Staff, in the 1972 FES[14], determined that:

---

[13] The Licensing Board presiding over the TMI-2 hearings asked to see "up-to-date data, if there are any changes, on projected water use. That is, volume taken in, consumed, discharged, in proportion or in relation to river stage, particularly in view of the experience of Unit 1 and the projections for Unit 2." Prehearing conference transcript at pp. 144-45. The Staff's response to this concern was presented by Dr. Robert B. Samworth on May 2, 1977. Testimony following transcript p. 988.

[14] The numbers presented in the 1972 FES were for both units at the station. Since Unit 1 is slightly smaller than Unit 2, a division of the numbers by two will give a conservative estimate of the radiation dose from Unit 1 from normal operation. This would be 15 man-rem/year.

> "About 7555 curies of radionuclides in gaseous effluents and 2008 curies of radionuclides in liquid effluents (including 2000 curies of tritium) will be released to the environment annually." NUREG-0112 at B-1.

To put the above information in perspective, the staff further stated that:

> "[U]sing conservative estimates, the annual total man-rem dose from all pathways received by the approximately 1,868,000 people who live within a fifty-mile radius of the plant would be about 31 man-rem. By comparison, an annual total of about 233,000 man-rem to the same population results from an annual average natural background dose of 0.125 rem in the Commonwealth of Pennsylvania.
>
> Operation of the plant will contribute only an extremely small increment of the radiation dose that persons living in the area normally receive from natural background radiation. Normal fluctuations of the natural background dose is expected to exceed the small dose increment contributed by the plant. Thus, the incremental increase will be difficult if not impossible to measure and will constitute no meaningful risk." NUREG-0112 at B-49 and B-51.

Present Staff Evaluation:

The staff has reviewed the operating experience of TMI-1 in order to correlate calculated releases[15] with observed releases of radioactive materials in liquid and gaseous effluents. These data are presented in Tables 5-2 and 5-4 of the TMI-1 Restart SER (NUREG-0680). Since the staff does not consider data from the first year of operation to be representative of the long-term operating life of the plant, only effluent release data from January 1976 through December 1978 were used in

---

[15] The effluent calculations were made using the model and parameters described in NUREG-0017, Calculation of Releases of Radioactive Materials in Gaseous and Liquid Effluents from Pressurized Water Reactors (PWR-GALE Code). The data derived from these calculations can be found in the staff's TMI-1 Restart SER (NUREG-0680) in Tables 5-1 and 5-2.

comparing the actual TMI-1 releases with the calculated releases. These comparisons are presented on page C5-3 of NUREG-0680. Based on these comparisons, the staff stated "[w]e believe that the calculational model reasonably characterizes the actual releases of radioactive material from this system." These data, which were generated as part of an independent evaluation of the TMI-1 liquid and gaseous radwaste systems under Appendix I to CFR Part 50 (See pages C5-2 - C5-6 of NUREG-0680), were used to calculate cost-assessment values for the total liquid and gaseous man-rem dose to the population within a 50 mile radius of the station during normal operations of Unit 1. This value, $13,400, yields an annual man-rem dose of 13 for the 3.2 million people assumed to live within 50 miles of TMI-1 in 2010 (See page C5-4). This same population will receive 400,000 man-rem from the annual average natural background dose of 0.125 rem in the Commonwealth of Pennsylvania. These values conform well to the 15 man-rem and 223,000 man-rem for the 1,868,000 people who lived within 50 miles of Unit 1 in 1972. As above, the normal fluctuation of the natural background dose is expected to exceed the small dose increment contributed by Unit 1. Therefore, the dose from normal operation to the population within 50 miles following restart of Unit 1 would not be significant.

E. Local Fogging

The Staff found that there would be:

> "Increased local fog and occasional augmentation of natural fog at Harrisburg International Airport from operation of cooling towers."

The potential for airport fogging from cooling tower operation was calculated by the applicant to be 29 hours per year for one unit and 39 hours per year for two with the effect persisting 6 to 10 hours. The applicant also stated that about half the 39 hours would be before sunrise. NUREG-0112 at B-38.

After its own analysis, the Staff characterized the applicant's estimates as "conservative" and stated that "the most

probable effect at the Station from the cooling towers is some enhancement of natural fog some distance from the plant, particularly during the winter months when the atmosphere saturation deficit is low." NUREG-0112 at B-39.

Present Staff Evaluation:

Increased local fogging from the operation of the cooling towers has occurred. Residents in the valley west of the plant site asserted, when interviewed, that fog in this area has increased and has been more persistent. The Staff has not monitored this effect. There have been no reports of any significant effect on operations at Harrisburg International Airport from operation of the cooling towers. Although restart of TMI-1 would cause this increased local fogging to resume, this would not be a significant environmental impact and, in fact, will not differ in any respect from the fogging impact from operation of Unit I which was previously evaluated and considered in the 1972 FES since the facility would operate after restart in the same cooling mode as that previously evaluated.

F. Accidental Radiation Exposure

In the 1972 FES the Staff concluded that:

> "A very low likelihood of accidental radiation exposure to nearby residents will be created."

NUREG-0112 at B-1.

Present Staff Evaluation:

Under the Commission's Statement of Interim Policy[16] dated June 13, 1980, the Staff has been directed to discuss accident considerations in its environmental review of nuclear power plants for which a final environmental impact statement has not yet been issued. Such discussions are to include a "reasoned consideration of the environmental risks (impacts)

---

[16] 45 *Fed. Reg.* 40101 (1980).

attributable to accidents at the particular facility . . ." 45 *Fed. Reg* 40103 (1980).

The Commission also stated that:

> "This change in policy is not to be construed as any lack of confidence in conclusions regarding the environmental risks of accidents expressed in any previously issued Statements, nor, absent a showing of similar special circumstances, as a basis for opening, reopening, or expanding any previous or ongoing proceeding." *Id.*

The restart of TMI-1 does not represent a "special circumstance" of the types[17] referred to in the policy statement which would require an accident analysis as described in the Commission's Statement of Interim Policy. Consequently the Staff has not prepared such an analysis of postulated accidents for this environmental impact appraisal. Further, the Staff finds no reason to invalidate its earlier conclusion and continues to believe that the likelihood of accidental radiation exposure to nearby residents as a result of the operation of TMI-1 is very low and is unchanged from that evaluated in the 1972 FES.

Notwithstanding the foregoing analysis, the staff did provide testimony in the restart proceeding in response to UCS Contention 13 which alleged that the TMI design does not provide protection against so-called Class 9 accidents and that there is not reasonable assurance that TMI-1 can be operated without endangering the health and safety of the public. Staff members Jack Rosenthal and Paul S. Check prepared testimony, presented at the hearings on January 28, 1981, which

---

[17] These were the proposed Clinch River Breeder Reactor Plant (CRBRP), a liquid-metal-cooled fast breeder reactor very different from the more conventional light water plants, and the application by Offshore Power Systems to manufacture floating nuclear plants where the special circumstances were the potentially serious consequences associated with water (liquid) pathways leading to radiological exposures if a molten reactor core were to fall into the water body on which the plant floats. 45 *Fed. Reg.* 40102.

showed, using Class 9 accident scenarios, design basis events, credible vs. incredible events and deterministic vs probablistic reviews (including safety goals), that the design of nuclear power reactors provides protection against a range of Class 9 accidents and that protection has been provided for TMI-1 for those events with nexus to the TMI-2 event.

G. Chemical Content of Liquid Effluents

In the 1972 FES the Staff found that:

> "Small amounts of chemicals will be released in the liquid effluents and cooling tower drift from the Station; but, aside from residual chlorine which will place organisms in the near vicinity of the outfall at significant risk if not carefully controlled, expected maximum concentrations to be discharged will be sufficiently low as not to pose a hazard to aquatic or human life."

NUREG-0112 at B-2.

Present Staff Evaluation:

The use of chemicals at the station was re-examined and updated in the supplement to the FES related to the operation of Unit 2.[18] Actual Unit 1 experience with chlorine discharge was evaluated in that supplement and in greater detail in testimony presented to the TMI Unit 2 ASLB.[19] The effects of Unit I operation on Susquehanna River water quality were examined again in August 1978 in conjunction with a request that the licensee be allowed to discontinue certain Unit 1

---

[18] Supplement to the FES related to the operation of TMI, Unit 2. USNRC NUREG-0112, December 1976.

[19] NRC Staff Response to Licensing Board's Question Relating to Water Use and Chemical Discharge by R. B. Samworth. Before the USNRC Atomic Safety and Licensing Board, In the Matter Metropolitan Edison Company, *et. al.* for Three Mile Island Nuclear Station, Unit 2. Following transcript page 988.

monitoring programs.[20] These later analyses confirm the FES prediction that chemical releases are "sufficiently low as not to pose a hazard to aquatic life."

There are also chemicals present in the drift from the Unit 1 cooling tower. The actual effects of these chemicals were examined preliminarily in the Unit 2 OL-FES supplement[21] and in somewhat greater detail following the Unit 2 accident.[22] No effects of tower drift are evident, effectively confirming the FES prediction.

Thus, since operation of TMI-1, if restart is authorized, will be in the same manner as previously evaluated, restart of TMI-1 should not result in chemical impacts from cooling tower drift that will differ from that previously predicted and evaluated.

H. Operation of Intake and Discharge System

The Staff found that:

> "Operation of intake and discharge system will cause some localized destruction of minute aquatic organisms and some local alteration of fish populations."

NUREG-0112 at B-2

Present Staff Evaluation:

Several recent reviews have been performed of the effects of cooling water withdrawal at TMI on Susquehanna River aqua-

---

[20] Environmental Impact Appraisal by the Office of Nuclear Reactor Regulation Supporting Amendment No. 51 to Facility Operating License No. DPR-50. Attached to letter, dated January 28, 1980, From R. W. Reid, NRC, to R. C. Arnold, Metropolitan Edison Company.

[21] Supplement to the FES related to the operation of TMI, Unit 2 USNRC NUREG-0112, December 1976.

[22] Gears, G. E., et al., Investigations of Reported Plant and Animal Health Effects in the Three Mile Island Area. USNRC, NUREG 0738, October, 1980.

tic resources. Fish impingement and entrainment data collected at Unit 1 during 1974 and 1975 were used in the preoperational NEPA environmental review for Unit 2[23], for the Unit 2 OL hearing[24], and for assessment of Environmental Technical Specification modifications at Unit 1.[25] Annual reports of ecological monitoring and intake impacts at TMI during 1978 and 1979 for both units[26], are complete, as required by the Unit 2 Environmental Technical Specifications. Those reports also summarize results for 1976 and 1977.

The review of Unit 1 data found impacts resulting from operation to be minimal and insignificant.[27] The impacts of

---

[23] Final Supplement to the Final Environmental Statement related to operation of Three Mile Island Nuclear Station, Unit 2 (NUREG-0112) which was issued in December 1976.

[24] NRC Staff Response of C. R. Hickey, Jr. to Licensing Board's Question Relating to Aquatic Impacts. Before the USNRC Atomic Safety and Licensing Board, In the Matter of Metropolitan Edison Company, *et al.* for the Three Mile Island Nuclear Station, Unit 2., 50 p. following transcript page 988, May 2, 1977, Harrisburg, PA.

[25] U.S. Nuclear Regulatory Commission. Environmental Impact Appraisal by the Office of Nuclear Reactor Regulation, Supporting Amendment No. 51 to Facility Operating License No. DPR-50. Metropolitan Edison Company. Three Mile Island Nuclear Station, Unit No. 1. Docket No. 50-289. January 1980.

[26] Nardacci, G. A. and Associates. An Ecological Study of the Susquehanna River near the Three Mile Island Nuclear Station. Annual Report for 1978. Ichthyological Associates, Inc., Etters, PA. July 1979.

Nardacci, G. A. and Associates. An Ecological Study of the Susquehanna River near the Three Mile Island Nuclear Station. Annual Report for 1979. Ichthyological Associates, Inc., Etters, PA. April 1980.

[27] U.S. Nuclear Regulatory Commission. Environmental Impact Appraisal by the Office of Nuclear Reactor Regulation, Supporting Amendment No. 51 to Facility Operating License No. DPR-50. Metropolitan Edison Company. Three Mile Island Nuclear Station, Unit No. 1. Docket No. 50-289. January 1980.

operation of both Units 1 and 2 also were predicted to be minimal and not adverse.[28] Monitoring during years of two-unit operation (1978-1979)[29], has confirmed that impingement has had insignificant effects on river fishes. Studies conducted during 1978 (as required by the ETS) showed that the methods used to sample fish egg and larva entrainment during 1974 and 1975 were not effective[30] and that entrainment losses were underestimated. Impacts to fish populations do not appear to be occurring, however. The river supports healthy biotic populations and successful recreational fisheries. The most productive and important spawning and nursery areas of fishery species in the York Haven Pond are removed from the immediate influence of power station operation. Fishery catches and harvests appear to be related to the intensity of fishing effort and to angler behavior[31] and not to the operation of TMI.

---

[28] Final Supplement to the Final Environmental Statement related to the operation of Three Mile Island Nuclear Station, Unit 2. December 1976.

NRC Staff Response of C. R. Hickey, Jr. to Licensing Board's Question Relating to Aquatic Impacts. Before the USNRC Atomic Safety and Licensing Board, In the Matter of Metropolitan Edison Company, *et al.* for the Three Mile Island Nuclear Station, Unit 2., 50 p. following transcript page 988, May 2, 1977, Harrisburg, PA.

[29] Nardacci, G. A. and Associates. An Ecological Study of the Susquehanna River near the Three Mile Island Nuclear Station. Annual Report for 1978. Ichthyological Associates, Inc., Etters, PA. July 1979.

Nardacci, G. A. and Associates. An Ecological Study of the Susquehanna River near the Three Mile Island Nuclear Station. Annual Report for 1979. Ichthyological Associates, Inc., Etters, PA. April 1980.

[30] Nardacci, G. A. and Associates. An Ecological Study of the Susquehanna River near the Three Mile Island Nuclear Station. Annual Report for 1978. Ichthyological Associates, Inc., Etters, PA. July 1979.

[31] Hickey, C. R., Jr. and R. B. Samworth. Non-radiological consequences to the aquatic biota and fisheries of the Susquehanna River from the 1979 accident at Three Mile Island Nuclear Station.

In summary, operational monitoring has confirmed that impacts associated with cooling water withdrawal by TMI Unit 1 are minimal, as predicted in preoperational NEPA reviews. Since operation of TMI-1, if restart is authorized, will be in the same manner as that for which intake and discharge system impacts were previously predicted and evaluated, restart of TMI-1 will not result in different or increased impacts relative to those previously evaluated.

I. Visual Impact Of Cooling Towers And Transmission Lines

In the FES for TMI-1 and TMI-2, the Staff found that there would be:

> "some visual impact from the cooling towers and transmission lines."

NUREG-0112 at B-2.

Present Staff Evaluation:

No mitigation of the above impacts were required. The cooling towers and transmission lines continue to be visible and the restart of Unit 1 will not alter this circumstance in any manner.

Summary

The Staff has evaluated the environmental effects of the further operation of TMI-1 and re-examined the impacts initially presented in the 1972 FES for Units 1 and 2. This has not led to the identification of any new environmental impacts or

---

USNRC, NUREG-0596. November 1979.

Hickey, C. R., Jr. Assessment of the consequences to the recreational fishery of the Susquehanna River from the 1979 accident at Three Mile Island Nuclear Station. USNRC Draft NUREG-0754. December 1980.

any significant changes in those identified previously with respect to the proposed restart of Three Mile Island Unit 1.[32]

The staff therefore recommends, since this environmental impact appraisal does not reveal significant environmental impacts if TMI-1 restart is authorized, issuance of a negative declaration.

---

[32] Since impacts from restart will not differ in kind or degree from those previously identified and evaluated in the FES prepared for initial licensing of TMI-1, we have determined that an environmental impact statement need not be prepared for the restart of TMI-1. Accordingly, alternatives to restart need not be considered under Section 102(2)(C) (42 U.S.C. 4332(2)(C)) of the National Environmental Policy Act (NEPA). In addition, we have determined that restart of the facility will not involve unresolved conflicts concerning alternative uses of available resources that would require consideration of alternatives under Section 102(2)(E) (42 U.S.C. 4332(2)(E)) of NEPA. Consequently, alternatives to restart of TMI-1 were not considered in this appraisal.

SUPPLEMENT TO THE ENVIRONMENTAL IMPACT APPRAISAL BY THE DIVISION OF ENGINEERING EVALUATING THE PROPOSED RESTART OF THREE MILE ISLAND NUCLEAR STATION, UNIT 1

DOCKET NO. 50-289

An Environmental Impact Appraisal (EIA) relating to the proposed restart of Three Mile Island, Unit 1 was issued by the NRC Staff in March 1981. In a motion filed by Intervenor Steven C. Sholly "To Reject the NRC Staff Environmental Impact Appraisal on TMI-1 Restart or in the Alternative to Seek Leave from the Board to Raise New Contentions" (April 9, 1981) and in the Commonwealth of Pennsylvania's response to that motion (April 22, 1981), certain deficiencies in the EIA were alleged. As set forth in the NRC staff's response to the Commonwealth (May 11, 1981), certain of the alleged deficiencies were identified as requiring supplementation of the EIA. Those matters are (1) the impacts of construction of the Interim Solid Waste Staging Facility, (2) the cumulative doses to the public from restart of TMI-1 and decontamination of TMI-2, and (3) the environmental impacts of the alert-notification system for increased emergency preparedness. These subjects are addressed below.

Construction Impacts of the Interim Solid Waste Staging Facility

The Staff is still of the opinion that all construction relating to Unit 1 which would cause disturbance of land onsite and of adjacent waters is complete. The interim solid waste staging facility is, to the Staff's knowledge, the only further outside construction connected in any way with Unit 1 which is planned prior to restart of that unit. It will be built in a severely disturbed industrial area on the Island. There will be no new environmental impacts. The environmental impacts of the initial construction disturbance were clearly spelled out in the Staff's 1972 FES (See NUREG-0112, page B-34).

The building will be directly south of the electrical switchyard and between it and the northern-most Unit 2 cooling

tower. It is designed to be a buffer against shipping delays or other problems and contains separate staging areas for low level wastes from each unit. It will be, in the Staff's view, a significant improvement over the present staging facilities for low-level radioactive wastes from Unit 1 prior to shipment since a former construction storage building in the far south-east corner of the fenced-in area is now being used for this purpose.

AN ASSESSMENT OF THE RISK TO HUMAN HEALTH TO INDIVIDUALS RESIDING AROUND TMI FROM THE COMBINED EFFECTS OF RADIOACTIVE RELEASES FROM DECONTAMINATION OF UNIT 2 AND NORMAL OPERATION OF UNIT 1

CONTENTS

I. INTRODUCTION

II. DOSES

- a. Decontamination of Unit 2
- b. Operation of Unit 1
- c. Cumulative Dose

III. HEALTH EFFECTS

- a. Decontamination of Unit 2
- b. Operation of Unit 1
- c. Cumulative Health Effects

IV. CONCLUSION

V. REFERENCES

I. INTRODUCTION

This assessment evaluates the risk to human health for individuals in the general population (excluding TMI-workers) who may be exposed to radiation resulting from radioactivity that may be released during the normal decontamination of Unit 2 and from normal operation of Unit 1. Section II presents radiation doses and Section III presents potential health effects. Dose estimates presented herein are taken from other documents as described. Cumulative doses are presented in a manner for comparison to background doses. The cumulative risk estimates are compared to risks unrelated to releases from TMI and to commonly understood risks for activities that are generally considered normal.

II. DOSES TO THE PUBLIC

The dose estimates presented here are taken from other publications and are not the result of calculations made specifically for this assessment. Both maximum individual dose estimates and population (50 mile radius) dose estimates are presented.

II.a DECONTAMINATION OF UNIT 2

The potential offsite doses due to the cleanup of TMI-2 are estimated in the "Final Programmatic EIS Related to Decontamination and Disposal of Radioactive Wastes Resulting From March 28, 1978, Accident at TMI Nuclear Station, Unit 2 (FPEIS).[1] The methodology used in that report to perform dose estimates are those described in Regulatory Guide 1.109[2] with certain modifications. The modifications and site specific parameters are given in Appendix W of the FPEIS.

In the summary of the FPEIS it is stated that the total body dose to the maximum exposed individual will range from 0.8 mrem to 2.3 mrem, provided the cleanup is conducted in accordance with the staff's estimated effluent release values. In any event, proposed effluent release criteria will limit the dose to no more than 15 mrem/yr for airborne releases, and no more than 3 mrem/yr for liquid releases.

The FPEIS presents estimates of the population dose that would be expected to occur over the entire cleanup period from both gaseous and liquid releases. The population dose was estimated to range from 10 to 1000 person-rems (FPEIS, p. 10-19), depending upon the exact decontamination methods that are employed.

Table 1 lists the dose estimates for the maximum exposed individual for the entire decontamination program for atmospheric and liquid releases. Entries are listed for each type of release, representing the full range of processing alternatives. 10 CFR 50, Appendix I design objective values are also listed.

Table 1. Dose Estimates for the Maximum Exposed Individual for the Entire Decontamination Program for Each Alternative, and Comparison with 10 CFR 50 Requirements (from FPEIS, Table, 10.11)

Option [b]	Dose (mrem) [a] (Total-body/max. organ)	
	Estimated Value	Appendix I, 10 CFR 50 Value (per yr.)
Atmospheric Releases:		
1. Ship processed water offsite	0.8/1.8	-/15
2. Natural Evaporation to Atmosphere	2.1/2.0	-/15
3. Forced Evaporation to Atmosphere — SDS/EPICOR II Processing	2.3/3.4	-/15
4. Forced Evaporation to Atmosphere SDS Processing	120./480.	-/15
5. Release Water to River — SDS/EPICOR II Processing	0.8/1.8	-/15
6. Release Water to River SDS Processing	0.8/1.8	-/15
Liquid Releases:		
1. Ship processed water offsite	.0015/.0023	3/10
2. Natural Evaporation to Atmosphere [c]	.0015/.0023	3/10
3. Forced Evaporation to Atmosphere SDS/EPICOR II Processing	0.8/1.1	3/10
4. Forced Evaporation to Atmosphere SDS Processing	7.0/16.	3/10
5. Release Water to River — SDS EPICOR II Processing	1.1/1.6	3/10
6. Release Water to River SDS Processing	9.8/23.	3/10

[a] The dose estimates represent the contribution of all decontamination programs for the entire cleanup.

[b] Dose estimates are listed separately for atmospheric releases and liquid releases, rather than adding them together, because different individuals are generally considered to be involved, and because the 10 CFR 50 dose objectives are different for each.

[c] A small fraction of water vapor may precipitate as rain over the Chesapeake Bay watershed.

Table 2 lists dose estimates to the projected population in year 2010 residing within a 50 mile radius of TMI resulting from atmospheric and liquid releases from the facility. Two entries are listed and represent a bounding range of processing options.

Table 2. Population Dose Estimates for the Population Residing Within 50 Miles of the Facility for the Range of Processing and Disposal Alternatives (From FPEIS, Table 10.12)

Decontamination Option	Estimated Dose (Person rem — Total Body)
Ship Processed Water Offsite	10
Forced Evaporation of SDS Processed Water	1000

II.b OPERATION OF UNIT 1

To assure that the public will be adequately protected from radiation during normal operation of Unit 1 conditions for operation are imposed by technical specifications to the operating license. New technical specifications for Unit 1 have been submitted to NRC by Metropolitan Edison Company by letter dated October 30, 1979. They are under staff review for conformance with the requirements of 10 CFR Part 20, 10 CFR Part 50, including Appendix I and 40 CFR Part 190, and a license amendment will be required to incorporate these technical specifications. For guidance, the staff has prepared example standard technical specifications for use by all licensees in preparing technical specifications. For pressurized water reactors the standard technical specifications are described in NUREG-0472.[3] The staff has reviewed aspects of the licensee's submittal which pertain to offsite radiation dose limits and offsite radiation monitoring. Their submittal follows NUREG-0472 in these areas.

The mechanism by which the technical specifications assure that the public health and safety is protected is by imposition of

offsite dose limits that, in turn, limit the amount of radioactive material that can be released. These limits are designed to assure that doses that could occur offsite are within certain plant design objectives which are described in the regulations (10 CFR Part 50, Appendix I). For example, for noble gases the technical specifications require that the noble gas air dose offsite be no more than 5 mrem to the total body, 15 mrem to the skin, 10 mrad gamma radiation air dose and 20 mrad beta radiation air dose during any calendar year. The licensee is required to monitor the releases and to make quarterly and annual dose calculations which are based on actual releases that occurred. If these calculations indicate that one of these requirements were exceeded, the licensee is required to report to NRC within 30 days.

Other limiting requirements fall into the following areas: 1) liquid effluent release rate, 2) liquid effluent dose, 3) gaseous effluent dose rate, 4) gaseous effluent dose (non-noble gases), and 5) total dose. The specifications are as follows:

1. The concentration of radioactive material in liquid effluents releases at any time from the site shall be limited to concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases.
2. The dose or dose commitment to an individual from radioactive materials in liquid effluents releases from the site shall be limited to:
   a) During any calendar quarter not greater than 1.5 mrem* to the total body and 5 mrem to any organ. +
   b) During any calendar year not greater than 3 mrem to the total body and not greater than 10 mrem to any organ. +

---

* The rem is a measure of the dose of any ionizing radiation to the body tissues in terms of its estimated biological effect relative to a dose of one roentgen of X-rays.

+ The liquid effluent requirements are implemented at the point of discharge to the river, hence, the dose that could occur as a result of real water intakes downstream would be expected to be significantly smaller than those limited by this specification.

3. The dose rate due to radioactive materials in gaseous effluents from the site shall be limited to:

   a) For noble gases not greater than 500 mrem/yr to the total body and 3000 mrem/yr to the skin.

   b) For all radioiodines and for all radioactive materials in particular form and radionuclides (other than noble gases) with half lives greater than 8 days, not greater than 1500 mrem/yr to any organ.

4. The dose to an individual from radioiodines, radioactive materials in particulate form, and radionuclides (other than noble gases) with half-lives greater than 8 days in gaseous effluents released from the unit shall be limited to:

   a) During any calendar quarter not greater than 7.5 mrem to any organ.

   b) During any calendar year not greater than 15 mrem to any organ.

5. The dose or dose commitment to any real individual from uranium fuel cycle sources is limited to less than or equal to 25 mrem to the total body or any organ, and 75 mrem to the thyroid over 12 consecutive months.*

The actual maximum individual doses that may occur offsite due to TMI-1 normal operation are expected to be less than the technical specification requirement listed above. Table 3 lists the staff's estimated doses to the maximum exposed individual as a result of normal operation of Unit 1.

---

* This specification is provided to meet the dose limitations of 40 CFR 190, the so-called Environmental Protection Agency Fuel-Cycle Standard.

Table 3. Comparison of Calculated Doses From Operation With Sections II.A, II.B, And II.C of Appendix I to 10 CFR Part 50 (Dose to Maximum Individual) (From Ref. 4, Table 5-6)

Criterion	Appendix I Dose Design Objectives	Calculated Doses
Liquid Effluents		
Dose to total body from all pathways	3 mrem/yr	2.0 mrem/yr
Dose to any organ from all pathways	10 mrem/yr	2.7 mrem/yr
Noble Gas Effluents		
Gamma dose in air	10 mrad/yr	3.4 mrad/yr
Beta dose in air	20 mrad/yr	8.9 mrad/yr
Dose to total body of an individual	5 mrem/yr	2.0 mrem/yr
Dose to skin of an individual	15 mrem/yr	5.5 mrem/yr
Radioiodine and Particulates [a]		
Dose to any organ from all pathways	15 mrem/yr	6.3 mrem/yr

[a] Carbon-14 and Tritium are included in this category.

Health risk estimates for the maximum exposed individual are presented below for both the value of 6 mrem/year, representing the "best estimate," and a value of 15 mrem/yr, representing the technical specification level. This value of 15 mrem/yr is considered to be a conservative (over estimate of true value) estimate of actual doses that are likely to occur.

Population doses for the population living within 50 miles of the plant were estimated to be in the range of 11 to about 20 person rems per unit (see Reference 5, p. 5-11 and "Final Environmental Statement of TMI, Units 1 and 2, 1972," p. V-29).[6] A value of 15 person-rems/yr will be used for the health effects estimates presented below.

II.c CUMULATIVE DOSES

Table 4 lists the doses and dose ranges for the cleanup operation at Unit 2 and for normal operation of Unit 1. Also in the table the sum of the doses from both are presented.

The average yearly cumulative dose to the population living within 50 miles of TMI for both the cleanup of Unit 2 and operation of Unit 1 is estimated to be in the range of 17 to 180* person-rems for the 6 year decontamination period. A longer decontamination period would result in a lower average yearly population dose.

Table 4. Dose Estimates for the Maximum Exposed Individual for Cleanup at Unit 2 and Normal Operation of Unit 1

	Total Body Dose (mrem/yr)	
	Technical Specification Dose During Any One Year [a]	Best Estimate of Average Yearly Dose Over 6 Year Decontamination Program
Decon. of Unit 2	15.	0.2-15 [b]
Operation of Unit 1	15.	6
Total	25. [c]	6.2-21

[a] Values in this column are based on the assumption that both cleanup of Unit 2 and Operation of Unit 1 is at maximum allowable levels of 10 CFR Part 50, Appendix I. The value 15 mrem/yr is the technical specification level resulting from radioiodines and particulates ingested via atmospheric release pathways and applies as an organ dose level and not a total body dose level. Because radionuclides absorbed by the body via food ingestion generally concentrate in specific organs, it is likely that a given organ dose reaches the 15 mrem/yr level well before the total body dose reaches that

* The value 17 was based on a 15 person-rem/yr dose for operation of Unit 1 plus a 10 person rem dose from Table 2 (low option) divided by 6 years; the value 180 was based on the same dose from Unit 1 plus the high option from Table 2, i.e., 1000 person-rem divided by 6 years.

level. Hence, the assumption of 15 mrem/yr total body, is considered to represent an upper bound of the technical specification level.

[b] The value of 0.2 comes from Option 1 of Table 1 divided by 6 years; the value of 15. comes from option 4 which would be constrained by 10 CFR 50, Appendix I to a maximum annual dose of 15 mrem.

[c] 40 CFR Part 190 limits the dose commitment to any real individual from uranium fuel cycle sources to 25 mrem/yr to the total body.

Table 5 below indicates the dose for different parts of the country due to natural background radiation to which all individuals are exposed every year. The range of natural background values over the United States is 70 to 310 mrems per year. The significance of a received radiation dose can be evaluated by comparison to natural background radiation. This has its basis in the fact that the human population has evolved in the presence of natural background radiation, and that there is no strong evidence that natural background radiation is linked to human mortality. Along these lines the National Council on Radiation Protection and Measurements stated that (p. 12)[7]: "It is unwarranted to urge people to remove themselves from areas where exposure to natural sources of radiation are of this magnitude (400 mrem/yr). This degree of exposure is not regarded currently as of sufficient magnitude to require separate consideration in the determination and control of an individual's medical or occupational exposure. There is no validated deleterious effect from natural background radiation in the portion of the population receiving the higher ranges of natural radiation but it must be recognized that satisfactory epidemiological studies to determine such effects are probably impracticable."

Table 5. Estimates of Natural "Background" Radiation Levels In the United States

	Annual Dose Rate (mrem/year)			
Location	Cosmic Radiation[a]	Terrestrial Radiation[a]	Internal Radiation[b]	Total
Atlanta, Georgia	44.7	57.2	28	130
Denver, Colorado	74.9	89.7	28	193
Harrisburg, PA	42.0	45.6	28	116

Las Vegas, Nevada	49.6	19.9	28	98
New York, NY	41.0	45.6	28	115
Pennsylvania	42.6	36.2[c]	28	107
Washington, DC	41.3	35.4	28	105
United States[d]	40-160	0-120	28	70-310

[a] From [(8) Table A-1]

[b] Based upon total for soft tissue (gonads) doses from [(9) Tables 42 and 43, p. 104].

[c] From [(8) Table A-2]

[d] From [(8) Table 15, p. 34]

The comparison of the maximum individual doses that may occur as a result of cleanup of Unit 2 and operation of Unit 1 to levels of natural background radiation and to spatial variation in natural background radiation suggests that the increased radiation dose from the plant is insignificant. In a similar fashion the natural background dose can be compared to the population dose due to the plant. Approximately 2.2 million people reside within the fifty mile radius of the plant. On the basis of Table 4, the annual natural background population dose would be about 255,000 person-rem, compared to the range of 17 to 180 person-rems from TMI. These comparisons suggest that the combined effect of cleanup of Unit 2 and operation of Unit 1 on the population will be insignificant from the offsite environmental radiation dose standpoint.

III. HEALTH EFFECTS

Radiological doses to the general public from radioactive releases from TMI may result in:

a. Late somatic effects in the form of fatal and non-fatal cancer in various body organs, following age- and organ-specific latency (delay) periods within the exposed population, and

b. Fatal and non-fatal genetic disorders in future generations of the exposed population.

Estimates of these health effects, which could occur randomly in an exposed population, are normally based on estimates of

cumulative population dose expressed as person-rems (average dose X number of people receiving dose). Population health effect estimates presented here reflect the total effect incurred by the population. In order to quantify individual risks, calculations are also presented here for the maximum exposed individual. Absolute risk estimators of 135 deaths from latent cancer per 10^6 total-body person-rems in the exposed population and 258 cases of genetic disorders per 10^6 total-body person-rems in the future generations of the exposed population were derived by the National Academy of Sciences Committee on the Biological Effects of Ionizing Radiation in the 1972 BEIR report[10] and the Reactor Safety Study (WASH-1400, October 1975).[11] The derivation assumes a linear, nonthreshold dose-effect relationship at all sublethal dose levels.* Using the above risk estimators for cancer deaths and diseases related to genetic disorders, health risks as a result of releases from TMI were calculated for the population residing around TMI and for the maximum exposed individual. The results of these calculations are described below.

III.a DECONTAMINATION OF UNIT 2

The potential health effects to the 50 mile population due to the cleanup of TMI-2 are estimated in the FPEIS. Table 6 (taken from FPEIS, Table 10.12) lists the potential number of cancer deaths or genetic abnormalities, designated as rates, for the 50 mile population of 2.2 million people around TMI as a result of decontamination activities. As these values are much less than 1 they suggest that it is very unlikely that any future cancer death will occur in the exposed population over the remaining lifetime of the population, or that any genetic abnormality will occur in the next 5 generations of the exposed population that could be associated with the cleanup operation.

---

* The latest report by the National Academy of Sciences Committee on the Biological Effects of Ionizing Radiation, BEIR-III,[12] suggests that the cancer risks may be even smaller than those of the 1972 BEIR report by a factor of about 2 or 3.

A better appreciation of the meaning of the numeric values in Table 6 can be gleaned by comparison of the rates of Table 6 to expected cancer death rates and genetic abnormality rates from causes other than TMI releases in the same population. For example, in 1976, about 20 percent of all deaths in the United States were due to cancer.[13] If those statistics are applied to the 2.2 million people living within 50 miles of TMI, the number of people in this population expected to die of cancer is 440,000. This number can be directly compared to the numeric rates in Table 6. This comparison indicates that the incremental chance of fatal cancer to the population or to an average individual in the population due to the decontamination activities is in the range of 1 chance in 400 million to 1 chance in 4 million, depending on the decontamination option that is chosen.

Table 6. Estimates of Potential Cancer Death Rate and Potential Genetic Abnormality Rate for Exposure of the Population Around TMI Due to Releases From Decontamination for the Range of Processing and Disposal Alternatives [a]

Decontamination Option	Estimated Dose (person-rem total body)	Rate [b] (deaths or abnormalities per 2.2 million people)	
		Cancer Fatality over Remaining Lifetime	Genetic Abnormality Over Next 5 Generations
Ship processed water offsite	10	1×10^{-3}	3×10^{-3}
Forced evaporation of — SDS processed water	1000	1×10^{-1}	3×10^{-1}

[a] All estimates rounded off to one significant figure.

[b] Population death or abnormality rate estimates are expected to be slightly smaller than the values presented here because the year-2010 population estimate of 3.2 million people was used for dose estimates from atmospheric pathways.

The BEIR-I report describes the normal incidence of diseases in which there is some evidence as being associated with a genetic component abnormality as 6 in 100, or 6 percent (p. 57, Table 4, of Ref. 10). In a similar fashion as was done for cancer death rates, the genetic abnormality rate due to the decontamination and decommissioning activities at TMI can be compared to the incidence of diseases related to genetic abnormalities from causes other than TMI releases. For the 2.2 million people in the 50 mile radius around TMI the expected incidence of non-TMI related genetic abnormalities is 132,000 ($0.06 \times 2.2 \times 10^6 = 132{,}000$). Comparing this to the rates of Table 6 indicates that the incremental chance of a genetic abnormalities [*sic*] to descendants of this population or to an average exposed individual in it over the next five generations ranges from 1 chance in 40 million to 1 chance in 400 thousand, depending upon the decontamination options which are used.

Table 7 lists the increased risk of potential cancer and genetic abnormalities due to radiation released from the cleanup of Unit 2 for the maximum exposed individual. Stated in other words, an individual dose of 0.8 to 2.3 mrem would incur an estimated increased risk of dying from cancer of between 1 in 2 million and 1 in 600,000, and an increased risk of a genetic effect to descendants over the next five generations of between 1 in 300,000 and 1 in 100,000. Similarly, an individual dose of 15 mrem would incur an estimated increased risk of dying from cancer of 1 in 100,000 and an increased risk of a genetic effect to descendants over the next five generations of 1 in 10,000.

Table 7. Increases in Maximum Exposed Individual Risk Estimates Over Background Due to the TMI-2 Cleanup

		Increased Risk to Maximum Exposed Individual Over Background(%)	
	Maximum Exposed Individual Dose	Lifetime [a] Cancer	Genetic [b]
Estimated Dose (mrem)	0.8-2.3	5.4×10^{-5}-1.5×10^{-4}	3.4×10^{-5}-9.9×10^{-4}

Maximum Dose (mrem)	15	1.0×10^{-3}	6.5×10^{-3}

[a] Value determined by multiplying cancer risk estimator (135×10^{-6}/person-rem) by the dose, divided by the normal background incidence rate (.20).

[a] Value determined by multiplying genetic risk estimator (258×10^{-6}/person-rem) by the dose, divided by the normal background incidence rate (.06).

III.b OPERATION OF UNIT 1

The population dose to the population residing within 50 miles of TMI is presented above as about 15 person-rems per year. As was done in the previous section, the potential cancer and genetic health effects are estimated. Table 8 lists these estimates. The numeric values in Table 8 can be put in relation to background incidence rates for potential cancer and for genetic abnormalities. This results in an incremental chance of fatal cancer to the population or to an average individual in the population of 1 part in 200 million, and in an incremental chance of diseases related to genetic abnormalities to the population or to an average individual in the population of 1 part in 33 million.

Table 8. Estimates of Cancer Death Rate and Genetic Abnormality Rate for Exposure of the Population Around TMI Due to Releases During Operation of Unit 1

	Rate [a] (deaths or abnormalities per 2.2 million people)	
Estimated Population Dose (person-rem total body)	Cancer Fatality over Remaining Lifetime	Genetic Abnormality Over Next 5 Generations
15	2×10^{-3}	4×10^{-3}

[a] All estimates rounded off to one significant figure.

The expected maximum individual dose due to operation of Unit 1 is presented above as 6 mrem/yr with an upper limit of 15 mrem/yr. The preceding section describes the increased risk over background incidence rates for a dose of 15 mrem as 1 part in 100,000 for cancer death and 1 part in 10,000 for genetic related effects.

III.c CUMULATIVE HEALTH EFFECTS

Table 9 lists the potential health effects and health effect ranges for the cleanup operation of Unit 2 and normal operation of Unit 1 for the maximum exposed individual. Also the sum of potential health effects for both are presented in the table. The cumulative risks to the maximum exposed individual are of order 10^{-6}.

The average yearly cumulative dose to the population living within 50 miles of TMI for both cleanup of Unit 2 and operation of Unit 1 is presented above as within the range of 17 to 180 person-rem/yr during the decontamination period. The potential health effects rates for the population of 2.2 million people is 2.3×10^{-3} to 2.4×10^{-2} for cancer and 4.4×10^{-3} to 4.6×10^{-2} for genetic related diseases. The potential health effect rates for the average exposed individual is 2.2×10^{6} times smaller than these rates, or of order 10^{-9} to 10^{-8}.

Table 9. Estimates of Potential Health Effects For the Maximum Exposed Individual for Cleanup of Unit 2 and Normal Operation of Unit 1.

	Rate[a] (death or abnormality for the maximum exposed individual per year)			
	Maximum Possible Rate		Average Expected Rate	
	Cancer Death	Genetic Abnormality	Cancer Death	Genetic Abnormality
Cleanup of Unit 2	2.0×10^{-6}	3.9×10^{-6}	2.6×10^{-8} - 2.0×10^{-6}	5.1×10^{-8} - 3.9×10^{-6}
Operation of Unit 1	2.0×10^{-6}	3.9×10^{-6}	8.0×10^{-7}	1.6×10^{-6}
Total	4.0×10^{-6}	7.8×10^{-6}	8.3×10^{-7} - 2.8×10^{-6}	1.7×10^{-6} - 5.5×10^{-6}

[a] Values based on doses of Table 4 multiplied by the risk estimators described above.

As was done above, the meaning of a risk can be better understood by comparison to natural incidence rates. As [*sic*] absolute risk of order 10^{-6} of cancer death is equivalent to an increase in the chance of dying of cancer of 1 part in 200,000. An absolute risk of order 10^{-6} of genetic abnormality is equivalent to an increase in the chance of offspring with genetic abnormalities of 1 part in 60,000. Another way of evaluating the meaning of a risk of order 10^{-6} or 10^{-8} is by study of risks from other activities that are considered normal. Table 10 lists activities that result in a risk of order 10^{-6}. These comparisons suggest that the risk level of 10^{-6} for the maximum exposed individual and 10^{-8} for the average exposed individual are negligible.

Table 10. Activities with Lifetime Risks of Order 10^{-6} (Reference 14, p. 188)

Type of Activity	Equivalent Mortality Risk of 10^{-6}
Automobile travelling	50 miles
Commercial flying	250 miles
Being a man age 60	20 minutes

The activities in Table 10 are ones in which individuals have some control over. Accidents that also have a risk order of 10^{-6} per year in which an individual has no control over are deaths incurred by lightning, tornadoes, or hurricanes (see reference 11, p. 3, Executive Summary).

IV. CONCLUSION

The cumulative population doses for the population residing within 50 miles of TMI, and maximum individual doses are presented. Effects of decontamination of Unit 2 and normal operation of Unit 1 are considered. The doses for either the maximum exposed individual or for the average exposed individual are a small fraction of natural background and within the range of geographical variation of natural background.

Potential health effects are presented for the population and for the maximum individual based on the estimated doses. The magnitude of risk is compared to non-TMI related incidence rates of cancer and genetic abnormalities and to risks of activities which are considered normal.

On the basis of the comparison of doses to natural background, and natural background fluctuations, and on the basis of the comparison of risks from radiation releases from TMI to normal background risks and to risks of activities considered normal, it is concluded that the combined effects of the cleanup of Unit 2 with normal operation of Unit 1 will result in insignificant risk to the public health.

V. REFERENCES

[1] "Final Programmatic Environmental Impact Statement Related to Decontamination and Disposal of Radioactive Wastes Resulting from March 28, 1979, accident at TMI-2," NRC Report NUREG-0683, Vol. 1 & 2, U.S. Nuclear Regulatory Commission, March 1981.

[2] USNRC Regulatory Guide, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I," NRC Report 1.109, October 1977, Rev. 1.

[3] U.S. Nuclear Regulatory Commission, "Radiological Effluent Technical Specifications for PWR's," July 1979, NRC Report NUREG-0472, Rev. 2.

[4] "TMI-1 Restart", NRC Report NUREG-0680, Office of Nuclear Reactor Regulation, U.S. NRC, June, 1980.

[5] USNRC, "Final Supplement to the Final Environmental Statement Related to Operation of TMI-2," December 1976, NRC Report NUREG-0112, Washington, D.C.

[6] Ibid., Appendix B.

[7] National Council on Radiation Protection and Measurement, "Basic Radiation Protection Criteria," NCRP Report No. 39, NCRP, Washington, D.C., Jan. 15, 1971.

[8] D. T. Oakley, "Natural Radiation Exposure in the United State," EPA Report ORP/SID 72-1, U.S. Environmental Protection Agency, Washington, D.C. (1972).

[9] National Council on Radiation Protection and Measurements, "Natural Background Radiation in the United States" NCRP Report No. 45, NCRP, Washington, D.C., November 15, 1975.

[10] Advisory Committee on the Biological Effects of Ionizing Radiation (BEIR) "The Effects on Populations of Exposure to Low Levels of Ionizing Radiation," National Academy of Sciences - National Research Council, Washington, D.C., November 1972.

[11] "Reactor Safety Study" NRC Report WASH-1400, U.S. Nuclear Regulatory Commission, October 1975.

[12] Advisory Committee on the Biological Effects of Ionizing Radiation (BEIR-III), "The Effects on Populations of Exposure to Low Levels of Ionizing Radiation," National Academy of Sciences - National Research Council, Washington, D.C., 1980.

[13] Garfinkel, L., and E. Silverberg, "Cancer Statistics, 1979," American Cancer Society Professional Education Publication, 1979.

[14] Pochin, E., "The Acceptance of Risk," British Medical Bulletin, 31, 3, 184-190 (1975).

The Environmental Impacts of the Emergency Operations Facility

Specific design and siting information on the Three Mile Island Emergency Operations Facility (EOF) is not available at this time. Criteria for the EOF are provided in NUREG-0696. *Functional Criteria for Emergency Response Facilities.* The staff believes that the environmental impacts of an EOF are minor, comparable to those of a small office building with working and conference space for at least 35 persons.

The Environmental Impacts of the Alert-Notification System

The proposed emergency preparedness alert-notification system for Three Mile Island Nuclear Generating Station is based on 83 sirens located to assure direct coverage of essentially 100 percent of the population within about 10 miles of the site. The sirens will be mounted on wooden utility posts and strategically located near schools and firehouses wherever possible. Criteria to be met or exceeded by this system are provided in NUREG-0654, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,* Revision I, Appendix 3. The system will meet the acceptable dissonant sound level described in the Federal Emergency Management Agency publication CPG-1-17, "October Warning Systems Guide". The sound levels received by any member of the public will be lower than 123 dbC, the level which may cause discomfort to individuals. Siren testing guidance requires a silent test every two weeks, a growl test quarterly and when preventive maintenance is performed, and a complete cycle test at least annually and as required for formal exercises. Advanced warning of complete cycle tests through newspapers, radio and television will minimize public disruption and confusion. After reviewing the design and testing criteria to be applied to the proposed TMI system, the staff concludes that the environmental impacts of placement and testing of the proposed system will be minor.

THE REPORT OF THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND—THE NEED FOR CHANGE: THE LEGACY OF TMI (October 1979)

[Footnotes Omitted]

* * * * *

OVERVIEW

SEVERITY OF THE ACCIDENT

Just how serious was the accident? Based on our investigation of the health effects of the accident, we conclude that in spite of serious damage to the plant, most of the radiation was contained and the actual release will have a negligible effect on the physical health of individuals. The major health effect of the accident was found to be mental stress.

The amount of radiation received by any one individual outside the plant was very low. However, even low levels of radiation may result in the later development of cancer, genetic defects, or birth defects among children who are exposed in the womb. Since there is no direct way of measuring the danger of low-level radiation to health, the degree of danger must be estimated indirectly. Different scientists make different assumptions about how this estimate should be made and, therefore, estimates vary. Fortunately, in this case the radiation doses were so low that we conclude that the overall health effects will be minimal. There will either be no case of cancer or the number of cases will be so small that it will never be possible to detect them. The same conclusion applies to the other possible health effects. The reasons for these conclusions are as follows.

An example of a projection derived for the total number of radiation-induced cancers among the population affected by the accident at TMI was 0.7. This number is an estimate of an average, such as the one that appears in the statement: "The average American family has 2.3 children."

In the case of TMI, what it really means is that each of some 2 million individuals living within 50 miles has a miniscule additional chance of dying of cancer, and when all of these minute probabilities are added up, they total 0.7. In such a situation, a mathematical law known as a Poisson distribution (named after a famous French mathematician) applies. If the estimated average is 0.7, then the actual probabilities for cancer deaths due to the accident work out as follows: There is a roughly 50 percent chance that there will be no additional cancer deaths, a 35 percent chance that one individual will die of cancer, a 12 percent chance that two people will die of cancer, and it is practically certain that there will not be as many as five cancer deaths.

Similar probabilities can be calculated for our various estimates. All of them have in common the following: It is entirely possible that not a single extra cancer death will result. And for all our estimates, it is practically certain that the additional number of cancer deaths will be less than 10.

Since a cancer caused by nuclear radiation is no different from any other cancer, additional cancers can only be determined statistically. We know from statistics on cancer deaths that among the more than 2 million people living within 50 miles of TMI, eventually some 325,000 people will die of cancer, for reasons having nothing to do with the nuclear power plant. Again, this number is only an estimate, and the actual figure could be as much as 1,000 higher or 1,000 lower. Therefore, there is no conceivable statistical method by which fewer than 10 additional deaths would ever be detected. Therefore, the accident may result in *no* additional cancer deaths or, if there were any, they would be so few that they could not be detected.

We found that the mental stress to which those living within the vicinity of Three Mile Island were subjected was quite severe. There were several factors that contributed to this stress. Throughout the first week of the accident, there was extensive speculation on just how serious the accident might

turn out to be. At various times, senior officials of the NRC and the state government were considering the possibility of a major evacuation. There were a number of advisories recommending steps short of a full evacuation. Some significant fraction of the population in the immediate vicinity voluntarily left the region. NRC officials contributed to the raising of anxiety in the period from Friday to Sunday (March 30-April 1). On Friday, a mistaken interpretation of the release of a burst of radiation led some NRC officials to recommend immediate evacuation. And on Friday Governor Thornburgh advised pregnant women and preschool aged children within 5 miles of TMI to leave the area. On Saturday and Sunday, other NRC officials mistakenly believed that there was an imminent danger of an explosion of a hydrogen bubble within the reactor vessel, and evacuation was again a major subject of discussion.

We conclude that the most serious health effect of the accident was severe mental stress, which was short-lived. The highest levels of distress were found among those living within 5 miles of TMI and in families with preschool children.

There was very extensive damage to the plant. While the reactor itself has been brought to a "cold shutdown," there are vast amounts of radioactive material trapped within the containment and auxiliary buildings. The utility is therefore faced with the massive cleanup process that carries its own potential dangers to public health. The ongoing cleanup operation at TMI demonstrates that the plant was inadequately designed to cope with the cleanup of a damaged plant. The direct financial cost of the accident is enormous. Our best estimate puts it in a range of $1 to $2 billion, even if TMI-2 can be put back into operation. (The largest portion of this is for replacement power estimated for the next few years.) And since it may not be possible to put it back into operation, the cost could even be much larger.

The accident raised concerns all over the world and led to a lowering of public confidence in the nuclear industry and in the NRC.

From the beginning, we felt it important to determine not only how serious the actual impact of the accident was on public health, but whether we came close to a catastrophic accident in which a large number of people would have died. Issues that had to be examined were whether a chemical (hydrogen) or steam explosion could have ruptured the reactor vessel and containment building, and whether extremely hot molten fuel could have caused severe damage to the containment. The danger was never—and could *not* have been—that of a *nuclear* explosion (bomb).

We have made a conscientious effort to get an answer to this difficult question. Since the accident was due to a complex combinaton of minor equipment failures and major inappropriate human actions, we have asked the question: "What if one more thing had gone wrong?"

We explored each of several different scenarios representing a change in the sequence of events that actually took place. The greatest concern during the accident was that significant amounts of radioactive material (especially radioactive iodine) trapped within the plant might be released. Therefore, in each case, we asked whether the amount released would have been smaller or greater, and whether large amounts could have been released.

Some of these scenarios lead to a more favorable outcome than what actually happened. Several other scenarios lead to increases in the amount of radioactive iodine released, but still at levels that would not have presented a danger to public health. But we have also explored two or three scenarios whose precise consequences are much more difficult to calculate. They lead to more severe damage to the core, with additional melting of fuel in the hottest regions. These consequences are, suprisingly, independent of the age of the fuel.

Because of the uncertain physical condition of the fuel, cladding, and core, we have explored certain special and severe conditions that would, unequivocally, lead to a fuel-melting accident. In this sequence of events fuel melts, falls to the

bottom of the vessel, melts through the steel reactor vessel, and finally, some fuel reaches the floor of the containment building below the reactor vessel where there is enough water to cover the molten fuel and remove some of the decay heat. To contain such an accident, it is necessary to continue removing decay heat for a period of many months.

At this stage we approach the limits of our engineering knowledge of the interactions of molten fuel, concrete, steel, and water, and even the best available calculations have a degree of uncertainty associated with them. Our calculations show that even if a meltdown occurred, there is a high probability that the containment building and the hard rock on which the TMI-2 containment building is built would have been able to prevent the escape of a large amount of radioactivity. These results derive from very careful calculations, which hold only insofar as our assumptions are valid. We cannot be absolutely certain of these results.

Some of the limits of this investigation were: (1) We have not examined possible consequences of operator error during or after the fuel melting process which might compromise the effectiveness of containment; (2) We have not examined the vulnerability of the various electrical and plumbing penetrations through the walls or the doorways for people and equipment; (3) The analysis was specific to the TMI-2 design and location (for example, the bedrock under the plant); (4) We recognize that we have only explored a limited number of alternatives to the question "What if . . .?" and, others may come up with a plausible scenario whose results would have been even more serious.

We strongly urge that research be carried out promptly to identify and analyze the possible consequences of accidents leading to severe core damage. Such knowledge is essential for coping with results of future accidents. It may also indicate weaknesses in present designs, whose correction would be important for the prevention of serious accidents.

These uncertainties have not prevented us from reaching an overwhelming consensus on corrective measures. Our reasoning is as follows: Whether in this particular case we came close to a catastrophic accident or not, this accident was too serious. Accidents as serious as TMI should not be allowed to occur in the future.

The accident got sufficiently out of hand so that those attempting to control it were operating somewhat in the dark. While today the causes are well understood, 6 months after the accident it is still difficult to know the precise state of the core and what the conditions are inside the reactor building. Once an accident reaches this stage, one that goes beyond well-understood principles, and puts those controlling the accident into an experimental mode (this happened during the first day), the uncertainty of whether an accident could result in major releases of radioactivity is too high. Adding to this the enormous damage to the plant, the expensive and potentially dangerous cleanup process that remains, and the great cost of the accident, we must conclude that—whatever worse could have happened—the accident had already gone too far to make it tolerable.

While throughout this entire document we emphasize that fundamental changes are necessary to prevent accidents as serious as TMI, we must not assume that an accident of this or greater seriousness cannot happen again, even if the changes we recommend are made. Therefore, in addition to doing everything to prevent such accidents, we must be fully prepared to minimize the potential impact of such an accident on public health and safety, should one occur in the future.

HANDLING OF THE EMERGENCY

Another area of our investigation dealt with the questions of whether various agencies made adequate preparations for an emergency and whether their responses to the emergency were satisfactory. Our finding is negative on both questions.

We are disturbed both by the highly uneven quality of emergency plans and by the problems created by multiple jurisdictions in the case of a radiation emergency. Most emergency plans rely on prompt action at the local level to initiate a needed evacuation or to take other protective action. We found an almost total lack of detailed plans in the local communities around Three Mile Island. It is one of the many ironies of this event that the most relevant planning by local authorities took place during the accident. In an accident in which prompt defensive steps are necessary within a matter of hours, insufficient advance planning could prove extremely dangerous.

We favor the centralization of emergency planning and response in a single agency at the federal level with close coordination between it and state and local agencies. Such agencies would need expert input from many other organizations, but there should be a single agency that has the responsibility both for assuring that adequate planning takes place and for taking charge of the response to the emergency. This will require organizational changes, since the agencies now best organized to deal with emergencies tend to have most of their experience with such events as floods and storms, rather than with radiological events. And, insofar as radiological events require steps that go beyond those in a normal emergency, careful additional planning is needed.

A central concept in the current siting policy of the NRC is that reactors should be located in a "low population zone" (LPZ), an area around the plant in which appropriate protective action could be taken for the residents in the event of an accident. However, this concept is implemented in a strange, unnatural, and round-about manner. To determine the size of the LPZ, the utility calculates the amount of radiation released in a *very serious* hypothetical accident. Using geographical and meteorological data, the utility then calculates that area within which an individual would receive 25,000 millirems or more to the whole body, during the entire course of the accident. This area is the LPZ. The 25,000-millirem standard is an extremely

large dose, many times more serious than that received by any individual during the entire TMI accident.

The LPZ approach has serious shortcomings. First, because of the extremely large dose by which its size is determined, the LPZs for many nuclear power plants are relatively small areas, 2 miles in the case of TMI. Second, if an accident as serious as the one used to calculate the LPZ were actually to occur, it is evident that many people living outside the LPZ would receive smaller, but still massive doses of radiation. Third, the TMI accident shows that the LPZ has little relevance to the protection of the public—the NRC itself was considering evacuation distances as far as 20 miles, even though the accident was far less serious than those postulated during siting. We have therefore concluded that the entire concept is flawed.

We recommend that the LPZ concept be abandoned in siting and in emergency planning. A variety of possible accidents should be considered during siting, particularly "smaller" accidents which have a higher probability of occurring. For each such accident, one should calculate probable levels of radiation releases at a variety of distances to decide the kinds of protective action that are necessary and feasible. Such protective actions may range from evacuation of an area near the plant, to the distribution of potassium iodide to protect the thyroid gland from radioactive iodine, to a simple instruction to people several miles from the plant to stay indoors for a specified period of time. Only such an analysis can predict the true consequences of a radiological incident and determine whether a particular site is suitable for a nuclear power plant. Similarly, emergency plans should have built into them a variety of responses to a variety of possible kinds of accidents. State and local agencies must be prepared with the appropriate response once information is available on the nature of an accident and its likely levels of releases.

The response to the emergency was dominated by an atmosphere of almost total confusion. There was lack of communication at all levels. Many key recommendations were made by

individuals who were not in possession of accurate information, and those who managed the accident were slow to realize the significance and implications of the events that had taken place. While we have attempted to address these shortcomings in our recommendations, it is important to reiterate the fundamental philosophy we stated above: One must do everything possible to prevent accidents of this seriousness, but at the same time assume that such an accident may occur and be prepared for response to the resulting emergency. The fact that too many individuals and organizations were not aware of the dimensions of serious accidents at nuclear power plants accounts for a great deal of the lack of preparedness and the poor quality of the response.

PUBLIC AND WORKER HEALTH AND SAFETY

We have identified a number of inadequacies with respect to procedures and programs to prevent or minimize hazards to health from radiation exposure from the operations of nuclear power plants. In setting standards for permissible levels of worker exposure to radioactivity, in plant siting decisions, and in other areas related to health, the NRC is not required to, and does not regularly seek, advice or review of its health-related guidelines and regulations from other federal agencies with radiation-related responsibilities in the area of health, for example the Department of Health, Education, and Welfare (HEW) or the Environmental Protection Agency (EPA). There is inadequate knowledge of the effects of low levels of ionizing radiation, of strategies to mitigate the health hazards of exposure to radiation, and of other areas relating to regulation setting to protect worker and public health. In preparation for a possible emergency such as the accident at TMI-2, various federal agencies (NRC, Department of Energy, HEW, and EPA) have assigned responsibilities, but planning prior to the accident was so poor that ad hoc arrangements among these federal agencies had to be made to involve them and coordinate their activities.

The Commonwealth of Pennsylvania, its Bureau of Radiation Protection and Department of Health—agencies with responsibilities for public health—did not have adequate resources for dealing with radiation health programs related to the operation of TMI. The utility was not required to, and did not, keep a record on workers of the total work-related plus non-work-related (for example, medical or dental) radiation exposure.

We make recommendations with respect to improving the coordination and collaboration among federal and state agencies with radiation-related responsibilities in the health area. We believe more emphasis is required on research on the health effects of radiation to provide a sounder basis for guidelines and regulations related to worker and public health and safety. We believe that both the state and the utility have an opportunity and an obligation to establish more rigorous programs for informing workers and the public on radiation health-related issues and procedures to prevent adverse health effects of radiation.

RIGHT TO INFORMATION

The President asked us to investigate whether the public's right to information during the emergency was well served. Our conclusion is again in the negative. However, here there were many different causes, and it is both harder to assign proper responsibility and more difficult to come up with appropriate recommendations. There were serious problems with the sources of information, with how this information was conveyed to the press, and also with the way the press reported what it heard.

We do not find that there was a systematic attempt at a "cover-up" by the sources of information. Some of the official news sources were themselves confused about the facts and there were major disagreements among officials. On the first day of the accident, there was an attempt by the utility to minimize its significance, in spite of substantial evidence that it

was serious. Later that week, NRC was the source of exaggerated stories. Due to misinformation, and in one case (the hydrogen bubble) through the commission of scientific errors, official sources would make statements about radiation already released (or about the imminent likelihood of releases of major amounts of radiation) that were not justified by the facts—at least not if the facts had been correctly understood. And NRC was slow in confirming good news about the hydrogen bubble. On the other hand, the estimated extent of the damage to the core was not fully revealed to the public.

A second set of problems arose from the manner in which the facts were presented to the press. Some of those who briefed the press lacked the technical expertise to explain the events and seemed to be cut off from those who could have provided this expertise. When those who did have the knowledge spoke, their statements were often couched in "jargon" that was very difficult for the press to understand. The press was further disturbed by the fact that, in order to cut down on the amount of confusion, a number of potential sources of information were instructed not to give out information. While this cut down on the amount of confusion, it flew in the face of the long tradition of the press of checking facts with multiple sources.

Many factors contributed to making this event one of the most heavily covered media events ever. Given these circumstances, the media generally attempted to give a balanced presentation which would not contribute to an escalation of panic. There were, however, a few notable examples of irresponsible reporting and some of the visual images used in the reporting tended to be sensational.

Another severe problem was that even personnel representing the major national news media often did not have sufficient scientific and engineering background to understand thoroughly what they heard, and did not have available to them people to explain the information. This problem was most serious in the reporting of the various releases of radiation and the explanation of the severity (or lack of severity) of these

releases. Many of the stories were so garbled as to make them useless as a source of information.

We therefore conclude that, while the extent of the coverage was justified, a combination of confusion and weakness in the sources of information and lack of understanding on the part of the media resulted in the public being poorly served.

In considering the handling of information during the nuclear accident, it is vitally important to remember the fear with respect to nuclear energy that exists in many human beings. The first application of nuclear energy was to atomic bombs which destroyed two major Japanese cities. The fear of radiation has been with us ever since and is made worse by the fact that, unlike floods or tornadoes, we can neither hear nor see nor smell radiation. Therefore, utilities engaged in the operation of nuclear power plants, and news media that may cover a possible nuclear accident, must make extraordinary preparation for the accurate and sensitive handling of information.

There is a natural conflict between the public's right to know and the need of disaster managers to concentrate on their vital tasks without distractions. There is no simple resolution for this conflict. But significant advance preparation can alleviate the problem. It is our judgment that in this case, neither the utility nor the NRC nor the media were sufficiently prepared to serve the public well.

* * * * *

COMMISSION FINDINGS

B. HEALTH EFFECTS

1. Based on available dosimetric and demographic information:

a. It is estimated that between March 28 and April 15, the collective dose resulting from the radioactivity released to the population living within a 50-mile radius of the plant was approximately 2,000 person-rems. The estimated annual col-

lective dose to this population from natural background radiation is about 240,000 person-rems. Thus, the increment of radiation dose to persons living within a 50-mile radius due to the accident was somewhat less than one percent of the annual background level. The average dose to a person living within 5 miles of the nuclear plant was calculated to be about 10 percent of annual background radiation and probably was less.

b. The maximum estimated radiation dose received by any one individual in the off-site general population (excluding the plant workers) during the accident was 70 millirems. On the basis of present scientific knowledge, the radiation doses received by the general population as a result of exposure to the radioactivity released during the accident were so small that there will be no detectable additional cases of cancer, developmental abnormalities, or genetic ill-health as a consequence of the accident at TMI.

c. During the period from March 28 to June 30, three TMI workers received radiation doses of about 3 to 4 rems; these levels exceeded the NRC maximum permissible quarterly dose of 3 rems.

d. The process of recovery and cleanup presents additional sources of possible radiation exposure to the workers and the general population.

2. There were deficiencies in instrumentation for measuring the radioactivity released, particularly during the early stages of the accident. However, these deficiencies did not affect the Commission staff's ability to estimate the radiation doses or health effects resulting from the accident.

3. The health effects of radiation dose levels of a few rems or less are not known. Estimates of the potential health effects of the TMI accident are based on extrapolations from the known health effects of higher levels of radiation.

4. The major health effect of the accident appears to have been on the mental health of the people living in the region of Three Mile Island and of the workers at TMI. There was

immediate, short-lived mental distress produced by the accident among certain groups of the general population living within 20 miles of TMI. The highest levels of distress were found among adults a) living within 5 miles of TMI, or b) with preschool children; and among teenagers a) living within 5 miles of TMI, b) with preschool siblings, or c) whose families left the area. Workers at TMI experienced more distress than workers at another plant studied for comparison purposes. This distress was higher among the nonsupervisory employees and continued in the months following the accident.

* * * * *

ACCOUNT OF THE ACCIDENT

At NRC headquarters, Lake Barrett, a section leader in the environmental evaluation branch, was concerned about the waste gas decay tank level. The previous evening, he had helped calculate "a hypothetical release rate" for the radiation that would escape if the tank's relief valves opened. Shortly before 9:00 a.m., Barrett was told of a report from Three Mile Island that the waste gas decay tanks had filled. He was asked to brief senior NRC staff officials on the significance of this. The group included Lee Gossick, executive director for operations; John Davis, then acting director of Inspection and Enforcement; Harold Denton, director of Nuclear Reactor Regulation; Victor Stello, Jr., then director of the Office of Operating Reactors; and Harold Collins, assistant director for emergency preparedness in the Office of State Programs. During the briefing, Barrett was asked what the release rate would mean in terms of an off-site dose. He did a quick calculation and came up with a figure: 1,200 millirems per hour at ground level. Almost at that moment, someone in the room reported a reading of 1,200 millirems per hour had been detected at Three Mile Island. By coincidence, the reading from TMI was identical to the number calculated by Barrett. "It was the exact same number, and it was within maybe 10 or 15 seconds from my first 1,200 millirems per hour prediction," Barrett told the Commission.

The result was instant concern among the NRC officials; "an atmosphere of significant apprehension," as Collins described it in his testimony. Communications between the NRC headquarters and Three Mile Island had been less than satisfactory from the beginning. "I think there was uncertainty in the operations center as to precisely what was going on at the facility and the question was being raised in the minds of many as to whether or not those people up there would do the right thing at the right time, if it had to be done," Collins testified. NRC officials proceeded without confirming the reading and without knowing whether the 1,200 millirem per hour reading was on- or off-site, whether it was taken at ground level or from a helicopter, or what its source was. They would later learn that the radiation released did not come from the waste gas decay tanks. The report that these tanks had filled was in error.

After some discussion, Harold Denton directed Collins to notify Pennsylvania authorities that senior NRC officials recommended the Governor order an evacuation. Collins telephoned Oran Henderson, director of the Pennsylvania Emergency Management Agency, and, apparently selecting the distance on his own, recommended an evacuation of people as far as 10 miles downwind from Three Mile Island. Henderson telephoned Lieutenant Governor Scranton, who promised to call the Governor. A Henderson aide also notified Thomas Gerusky, director of the Bureau of Radiation Protection, of the evacuation recommendation. Gerusky knew of the 1,200 millirem reading. A telephone call to an NRC official at the plant reinforced Gerusky's belief that an evacuation was unnecessary. He tried to telephone Governor Thornburgh, found the lines busy, and went to the Governor's office to argue personally against an evacuation.

* * * * *

SATURDAY, MARCH 31

The great concern about a potential hydrogen explosion inside the TMI-2 reactor came with the weekend. That it was a

groundless fear, an unfortunate error, never penetrated the public consciousness afterward, partly because the NRC made no effort to inform the public it had erred.

Around 9:30 p.m. Friday night, the NRC chairman asked Roger Mattson to explore the rate at which oxygen was being generated inside the TMI-2 reactor system and the risk of a hydrogen explosion. "He said he had done calculations," Mattson said in his deposition. "He was concerned with the answers." Mattson is director of the Division of Systems Safety within the Office of Nuclear Reactor Regulation (NRR), which is headed by Denton, and had spent part of Thursday and Friday working on how to remove a gas bubble from the reactor. Following Denton's departure for TMI, Mattson served variously as NRR's representative or deputy representative at the Incident Response Center.

Hydrogen had been produced in the reactor as a result of a high-temperature reaction that occurred between hot steam and the zirconium cladding of the fuel rods. For this hydrogen to explode or burn—a less dangerous possibility—enough oxygen would have to enter the system to form an explosive mixture. There were fears this would happen as the result of radiolysis. In this process, radiation breaks apart water molecules, which contain hydrogen and oxygen.

Two NRC teams worked throughout the weekend on the problem, and both sought help from laboratories and scientists outside the NRC. One group addressed the rate at which radiolysis would generate oxygen at TMI-2. The second analyzed the potential for hydrogen combustion. Robert Budnitz of the NRC also asked experts about possible chemicals that might remove the hydrogen.

At noon, Hendrie talked by telephone with Denton and expressed his concern that oxygen freed by radiolysis was building up in the reactor. Earlier, Hendrie had told Victor Stello, Jr., Denton's second-in-command at TMI, the same thing. The NRC chairman told Denton that Governor Thorn-

burgh should be made aware of the potential danger. Denton promised to speak with Thornburgh.

[Photographs Omitted]

Shortly after 1:00 p.m., Mattson got some preliminary answers regarding the potential for a hydrogen explosion. An hour later, Mattson got more replies. "I had an estimate there was oxygen being generated, from four independent sources, all with known credentials in this field," he said in his deposition. "The estimate of how much oxygen varied, but all estimates said there was considerable time, a matter of several days, before there was a potential combustible mixture in the reactor coolant system."

At a Commission hearing, Mattson later admitted in response to questions from Commissioner Pigford that the NRC could have determined from the information available at the time that no excess oxygen was being generated and there was no real danger of explosion. But when Mattson met with the NRC commissioners at 3:27 p.m. on Saturday, "the bottom line of that conversation . . . was there were several days required to reach the flammability limit, although there was oxygen being generated," Mattson recalled in his deposition. "And I expressed confidence that we were not underestimating the reactor coolant system explosion potential; that is, the estimate of 2 to 3 days before reaching the flammability limit was a conservative estimate." By Saturday night, however, Mattson would be told by his consultants that their calculations indicated that the oxygen percentage of the bubble was on the threshold of the flammability limit.

Around 6:45 p.m., Mattson talked with Vincent Noonan, the man within NRC most knowledgeable about what might result from an explosion inside a reactor. One NRC consultant had predicted that a hydrogen blast would produce pressures of 20,000 pounds per square inch within the TMI-2 reactor. B&W, designer of the reactor, however, had considered the dampening effects of water vapor on an explosion and those of an enriched hydrogen environment and calculated a total pres-

sure of 3,000 to 4,000 psi. That was encouraging. Previous analyses indicated the reactor coolant system of a TMI-2 reactor could withstand blast pressures of that magnitude.

Late Saturday evening, James Taylor of B&W reiterated another B&W engineer's conclusion first relayed to the NRC Thursday night—that no excess oxygen was being generated. That information, Mattson stated in his deposition, never reached him.

Saturday at 2:45 p.m., Hendrie met with reporters in Bethesda. He said then that a precautionary evacuation out to 10 or 20 miles from the Island might be necessary if engineers attempted to force the bubble out of the reactor. NRC had concluded such an attempt might cause further damage to the core, Hendrie said, and it might touch off an explosion of the bubble.

Stan Benjamin, a reporter with the Washington bureau of the Associated Press, followed up Hendrie's press conference by interviewing two NRC officials: Edson Case, Denton's deputy in the Office of Nuclear Reactor Regulation, and Frank Ingram, a public information spokesman. From them, and an NRC source he refused to name, Benjamin learned of the concern within the Incident Response Center that the bubble could become a potentially explosive mixture within a matter of days, perhaps as few as two. Benjamin checked his story with Case and Ingram, reading much of it to them word by word, before releasing the article. Case and Ingram agreed it was accurate. The report—first transmitted as an editor's note at 8:23 p.m.—was the first notice to the public that some NRC officials feared the bubble might possibly explode spontaneously.

Denton had been briefed throughout Saturday afternoon and evening by Hendrie and NRC officials in Bethesda on the oxygen estimates and the potential for a burn or explosion. But he learned of the AP story only a short time before he joined Governor Thornburgh and Lieutenant Governor Scranton for a late evening press conference in Harrisburg. The Governor

assured reporters that "there is no imminent catastrophic event foreseeable at the Three Mile Island facility." Denton, too, said: "There is not a combustible mixture in the containment or in the reactor vessel. And there is no near-term danger at all." Denton also tried to deflate the impression, voiced by several reporters, that contradictions existed between himself and his colleagues at NRC headquarters. "No, there is no disagreement. I guess it is the way things get presented," he said.

But there was disagreement, and Denton wanted it resolved. President Carter had announced earlier in the evening he would visit TMI the following day. Denton told Stello to explore the oxygen-hydrogen issue further with outside experts. Stello realized the concern in Washington. He had received a telephone call shortly after 9:00 p.m. from Eugene Eidenberg, a Presidential aide, inquiring about the AP story. Stello told the White House that he did not share the concern felt at NRC headquarters.

Office - Supreme Court, U.S.
FILED
SEP 30 1982
ALEXANDER L. STEVAS,
CLERK

No. 81-2399
No. 82-358

In the Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

BRIEF IN OPPOSITION TO PETITIONS FOR WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

WILLIAM S. JORDAN, III
Counsel of Record

ELLYN R. WEISS
HARMON & WEISS
1725 I Street, N.W.
Suite 506
Washington, D.C. 20006
(202) 833-9070

Attorneys for Respondents

September 30, 1982

QUESTION PRESENTED

Did the Court of Appeals correctly hold that the National Environmental Policy Act, 42 U.S.C. §4321, et seq., requires the Nuclear Regulatory Commission to consider the impact of reopening Three Mile Island Unit No. 1 on the psychological health of surrounding residents where (1) that impact is alleged to involve medically recognized damage to human psychological health in an area where such damage has already occurred as a result of the accident at Three Mile Island Unit 2, and (2) the impact is directly related to prior actual physical exposure to radiation and the prospect of future physical damage. */

---

*/ All of the parties are listed in the caption of this Brief.

TABLE OF CONTENTS

Page

Question Presented i

Table of Contents ii

Table of Authorities iii

Opinions Below 2

Jurisdiction 2

Statute Involved 3

Statement 3

Reasons The Petitions Should Be Denied... 17

I. This Case Does Not Involve An Important Issue Of Federal Law Worthy Of Supreme Court Review 19

A. The Decision Below Will Not Unduly Burden The NRC, The Federal Government In General, Or Even TMI-1 Itself 19

B. The Decision Below Is Unique And Is Not In Conflict With Any Other Decisions Of The Courts Of Appeals 32

C. The Commission's Argument On The Merits Depends On A Question Of Fact And Ignores The Statute, Legislative History, And Governing Regulations..... 41

Page

1. The Commission's argument depends on a question of fact that is not appropriate for review in this Court.... 42

2. The decision below is consistent with and fully supported by the statute, the legislative history, and the governing regulations 47

II. The Facts Have Been Inadequately Developed To Allow Proper Consideration By This Court..... 55

Conclusion 63

TABLE OF AUTHORITIES

Cases:

Breckinridge v. Rumsfeld, 537 F.2d 864 (6th Cir. 1976), cert. denied, 429 U.S. 1061 (1977) 37

Carolina Environmental Study Group v. U.S., 510 F.2d 796 (D.C. Cir. 1975)..... 44

Citizens Against Toxic Sprays v. Bergland, 428 F. Supp. 908 (D. Ore. 1977) 33,53

Como-Falcon Community Coalition, Inc. v. Department of Labor, 465 F.Supp. 850, aff'd 609 F.2d 342 (8th Cir. 1979), cert. denied, 466 U.S. 936 (1980) 37, 38

Page

Concerned About Trident v. Rumsfeld, 555 F.2d 817 (D.C. Cir. 1977) 44

Ecology Action v. U.S.A.E.C., 492 F.2d 998 (2d Cir. 1974) 26

First National Bank of Chicago v. Richardson, 484 F.2d 1369 (7th Cir. 1973) 34, 35, 36

Foundation for North American Wild Sheep v. U.S. Department of Agriculture, 681 F.2d 1172 (9th Cir. 1982) 55

Goodman Group, Inc. v. Dishroom, 679 F.2d 182 (9th Cir. 1982) 37

Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973) 34, 35

Image of Greater San Antonio, Texas v. Brown, 570 F.2d 517 (5th Cir. 1978) 37

Maryland-National Capital Park and Planning Commission v. U.S. Postal Service, 487 F.2d 1029 (D.C. Cir. 1973) 34, 35

National Organization for the Reform of Marijuana Laws v. U.S. Department of State, 452 F.Supp. 1226 (D.D.C. 1978) 33

Nucleus of Chicago Homeowners Assn. v. Lynn, 524 F.2d 255 (7th Cir. 1975), cert. denied, 424 U.S. 967 (1976)... 37

Page

Piper Aircraft Co. v. Reyno, 102 S.Ct. 252 (1981) 14

Sierra Club v. Coleman, 405 F.Supp. 53 (D.D.C. 1975) 33

State of Minnesota v. NRC, 602 F.2d 412 (D.C. Cir. 1979) 24

Sunflower Alliance, Inc. v. NRC, petition for review filed, No. 82-3563 (6th Cir. September 13, 1982) 25

The Monrosa v. Carbon Black Export, Inc., 359 U.S. 180 (1959) 25

United States v. Vuitch, 402 U.S. 62 (1971) 60

Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519 (1978).. 24,26,27

Administrative Decisions:

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 2), LBP-77-70, 6 NRC 1185 (1977) 5

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1):

CLI-79-8, 10 NRC 141 (1979) 9

LBP-80-8, 11 NRC 297 (1980) .11,16,36

CLI-80-39, 12 NRC 607 (1980).... 9,11

CLI-81-20, 14 NRC 593 (1981) 11

Page

CLI-82-13, Docket No. 50-289, (July 16, 1982) 30,31

Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2) Dockets 50-440, 50-441 (July 19, 1982) 23

Statutes:

Atomic Energy Act of 1954, 42 U.S.C. §2011, et seq.

42 U.S.C. §2239(a) 4

National Environmental Policy Act of 1969, 42 U.S.C. §4321, et seq.

42 U.S.C. §4321 50,52

42 U.S.C. §4331(b)(2) 50

42 U.S.C. §4331(c) 52

42 U.S.C. §4332(2)(C) 47

42 U.S.C. §4332(2)(C)(i) 42,47

Regulations:

10 C.F.R. Part 2:

10 C.F.R. 2.714(b) 27

10 C.F.R. Part 51:

10 C.F.R. 51.5(a)(2) 45

50 C.F.R. Part 1508:

40 C.F.R. 1508.8 50,51

Page

40 C.F.R 1508.14 50,51,54

Miscellaneous:

115 Cong. Rec.:

S1784, 1787 (daily ed. February 18, 1969) 49

S17451 (daily ed. December 20, 1969) 48

43 Fed. Reg. 703 (February 17, 1978) 5

43 Fed. Reg. 55988 (November 29, 1978) 51

44 Fed. Reg. 40461 (July 10, 1979).. 9

45 Fed. Reg. 40101 (Jun3 13, 1980).. 33

47 Fed. Reg. 31762 (July 22, 1982) 20,22,23

Harrisburg Patriot, August 25, 1982 at 23, col. 1 29

Proceedings of the Workshop on Psychological Stress Associated with the Proposed Restart of Three Mile Island, Unit 1, NUREG/CP-0026, April 1982 29

Report of the President's Commission on the Accident at Three Mile Island - The Need for Change: The Legacy of TMI (October 1979) 4,6,7,8

IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1982

No. 81-2399

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

No. 82-358

UNITED STATES NUCLEAR REGULATORY COMMISSION and THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

BRIEF IN OPPOSITION TO PETITIONS FOR WRITS OF CERTIORARI

People Against Nuclear Energy ("PANE") opposes the petitions for writs of certiorari filed in these cases.

OPINIONS BELOW

The opinions and the judgment of the Court of Appeals are reported at 678 F.2d 222. They are reproduced in Appendix A to the petition filed by Metropolitan Edison Co., et al..[1/]

JURISDICTION

The jurisdiction of this Court is invoked by Petitioners under 28 U.S.C. §1254(1) with respect to an Amended Judgment issued by the Court of Appeals on April 2, 1982 (Pet. App. 1-3a) and a modified version of that judgment entered on May 14, 1982 (Pet. App. 29a), which was incorporated in the opinions of the Court of Appeals, 678 F. 2d at 235-236 (Pet. App. 29a).

1/ The petition filed by Metropolitan Edison Co., et al., in No. 81-2399 will be cited "Met. Ed. Pet.," and that filed by the Nuclear Regulatory Commission and the United States in No. 82-358 will be cited "NRC Pet." As the NRC has done, we will cite the Appendix to the Metropolitan Edison Co. petition as "Pet. App."

STATUTE INVOLVED

This case involves the National Environmental Policy Act, 42 U.S.C. §4321, et seq. ("NEPA"). The pertinent provisions, Sections 2, 101 and 102, 42 U.S.C. §§4321, 4331, and 4332 are reproduced in Appendix F to the petition of Metropolitan Edison Co. (Pet. App. 109a).

STATEMENT

On March 28, 1979, a serious accident occurred at Unit 2 of the Three Mile Island nuclear power plant ("TMI-2") in central Pennsylvania. It is the only incident in nearly three decades of commercial reactor operation so threatening to the public health and safety that public authorities recommended an evacuation. Tens of thousands of people left the surrounding area. The petitions before the Court seek a ruling that psychological health damage, "the major health effect" of

this unique event,[2/] should not be considered by the Nuclear Regulatory Commission ("NRC" or "the Commission"), in deciding whether to allow renewed operation of Three Mile Island Unit 1 ("TMI-1"), the undamaged twin of the crippled Unit 2. The petitions do not raise an issue that is worthy of consideration by this Court under the standards for granting certiorari review.

Construction of TMI-2 was authorized on November 4, 1969, after extensive safety review by the staff of the then Atomic Energy Commission and after the public hearing required by Section 189(a) of the Atomic Energy Act, 42 U.S.C. §2239(a). On April 4, 1974, the utilities that own TMI-2 applied for a license to operate the facility. After further extensive safety reviews by

---

2/ Report of the President's Commission on the Accident at Three Mile Island - The Need for Change: The Legacy of TMI (October 1979) at 35, J.A. 267 (Hereafter "President's Commission Report"). "J.A." refers to the Joint Appendix filed in the court below.

the agency staff and a public hearing in which two citizens organizations and the Commonwealth of Pennsylvania participated, the Atomic Safety and Licensing Board authorized the staff of the Nuclear Regulatory Commission to issue an operating license after making all other findings necessary to assure reactor safety.[3/] The operating license was issued on February 8, 1978.[4/] TMI-2 entered commercial operation on December 30, 1978.

Despite the extensive safety reviews, TMI-2 suffered the nation's worst nuclear accident on March 28, 1979, just three months after it began commercial operation. The accident involved a sequence of events that had not been anticipated by the designers of

---

3/ Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 2), LBP-77-70, 6 NRC 1185, 1186-87, 1228-31 (1977).

4/ 43 Fed. Reg. 7073 (February 17, 1978).

the plant and that was considered to be "incredible" by the NRC and the nuclear industry.

As the accident began, information was sketchy and confusing, and it appeared that the severity of the accident was not well understood. By Friday, March 30, 1979, the situation appeared to pose such a serious threat to the public health and safety that the Governor of Pennsylvania advised the unprecedented evacuation of pregnant women and preschool children within five miles of the reactor. Tens of thousands of surrounding residents left the area.[5/]

Fortunately, although the accident did involve substantial destruction of the reactor core and a minor release of radiation to the atmosphere, a disaster with massive

---

5/ President's Commission Report at 13, 18, J.A. 259, 264.

radiation exposure was averted.[6] While the President's Commission on the Accident at Three Mile Island found that low levels of radiation "may result in the later development of cancer, genetic defects, or birth defects among children who are exposed in the womb," the President's Commission believed the radiation doses resulting from the TMI-2 accident to be so small that it would never be possible to detect physical health effects.[7] However, the President's Commission

> found that the mental stress to which those living within the vicinity of Three Mile Island were subject was quite severe.[8]

It concluded that

---

[6] / Id. at 12, J.A. 258.

[7] / Id. at 12-13, J.A. 258-259.

[8] / Id. at 13, J.A. 259.

the most serious health effect of the accident was severe mental stress, which was short-lived. 9/

As a result of the accident at Unit 2, the NRC evaluated the status of Unit 1, which had been in operation for several years, but which, by coincidence, was not operating at the time of the accident. The Commission concluded on July 2, 1979, that it lacked

---

9/ Id. Metropolitan Edison Co., et al., suggest at pages 18-19 of their petition that the psychological health damage caused by the accident at Unit 2 was caused largely by misinformation because the NRC misunderstood reported radiation levels and because there were reports of a possible hydrogen bubble explosion that never occurred. According to the utility, any psychological health damage is inconsistent with reality because it resulted from perceptions of danger that did not, in fact, exist. Commissioner Bradford dealt swiftly and thoroughly with this argument, noting that many mistakes in the assessment of the TMI-2 accident resulted in public statements that were unduly reassuring. He pointed out, for example, that in the early hours of the accident when all assessments and statements were reassuring, the reactor core was partially uncovered for several hours. At that time, the Commission was supporting actions by the utility that could have made the situation far more dangerous than the event that was actually in progress. Commissioner Bradford concluded that even if the projected possibility of a hydrogen explosion was incorrect, the danger was indeed very real for other reasons, and psychological

> the requisite reasonable assurance that the same licensee's Three Mile Island Unit No. 1 facility, a nuclear power reactor of similar design, can be operated without endangering the health and safety of the public.10/

On August 9, 1979, the Commission reiterated its order that TMI-1 remain in a cold shutdown condition, and it directed that an adjudicatory hearing be conducted prior to restart of the facility.11/ In instituting the hearing, the Commission invited briefs on the question of whether psychological damage related to the TMI-2 accident could be legally relevant to the proceeding.12/

---

stress reactions "cannot be dismissed as irrational or unrelated to radiation hazard." Metropolitan Edison Co., (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-39, 12 NRC 607, 623, n. 7 (1980) (Pet. App. 96a-97a).

10/ 44 Fed. Reg. 40461 (July 10, 1979), J.A. 21.

11/ Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), CLI-79-8, 10 NRC 141 (1979), J.A. 22-32.

12/ Id. at 148, J.A. 29.

People Against Nuclear Energy ("PANE") was formed soon after the accident by local residents living within five miles of Three Mile Island. Most of the members of PANE had previously been generally apolitical or unconcerned about the nuclear plant in their midst. They now raised to the Nuclear Regulatory Commission their primary concern with respect to the restarting of Unit 1 -- the belief that restart would cause and perpetuate such serious psychological health damage and accompanying physical symptoms among the local population that it would be impossible to recover from the effects of the accident at Unit 2.[13/]

The Licensing Board for the TMI-1 restart hearing recommended that the Commission consider the effect of restart on the psychological health of local residents under

---

13/ PANE's contentions are reproduced at Pet. App. 115a-116a. Only PANE's Contention No. 1, raising the issue of psychological health damage, is significant for purposes of the Court's review here.

the National Environmental Policy Act ("NEPA"),[14] but the Commission itself, by a 2-2 vote, rejected PANE's contentions.[15] Although the Commission later confirmed that result when a fifth Commissioner was appointed, a majority opinion was never issued.[16]

The United States Court of Appeals for the District of Columbia Circuit reversed the Commission's decision. (Pet. App. 1a-76a). The Court held that NEPA was intended to protect human health, that human health includes psychological health, and that NEPA

14/ Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), LBP-80-8, 11 NRC 297 (1980), J.A. 63. (Hereafter "Board Certification").

15/ Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-80-39, 12 NRC 607 (1980) (Pet. App. 77a-100a).

16/ Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), CLI-81-20, 14 NRC 593 (1981) (Pet. App. 101a-102a).

applies to the sort of medically recognized psychological health damage alleged by PANE, as distinct from mere dissatisfactions arising from social, economic, or political concerns. (Pet. App. 16a-17a).[17] The Court's ruling is extremely narrow, relating only to the unique situation at Three Mile Island, where the existence of psychological health damage has already been recognized, and where it is directly related to the potential of a nuclear reactor to cause overwhelming damage to the human environment. (Pet. App. 15a).[18]

17/ PANE had also raised the issue of the cognizability of psychological health damage under the Atomic Energy Act. The Court of Appeals upheld the Commission's ruling that it was not cognizable. Senior Circuit Judge McGowan accounted for the split decision, ruling that PANE's contentions are cognizable under NEPA but not under the Atomic Energy Act.

18/ The Court also held that a supplemental environmental impact statement would be required here if there now exist at Three Mile Island new circumstances or information on psychological health effects that were not considered in the original EIS. (Pet. App. 18a-26a). The correctness of this aspect of

Judge Wilkey dissented on three grounds. First, he argued that any psychological health damage would be caused by peoples' fears of federal action rather than by the federal action itself. According to Judge Wilkey, PANE is seeking to have the NRC consider simple fears about the operation

---

the decision has not been challenged by either petitioner, although both note their disagreement with a broad reading of the Court's language to the effect that mere ongoing regulation triggers the application of NEPA. (Met. Ed. Pet. 7, n. 10; NRC Pet. 17, n. 12). We agree with the NRC that the broad language of the Court's opinion on this issue is dicta, and that the ultimate ruling hinges on the fact that the NRC is engaged in a specific proposal for federal action-restart of TMI-1. This is apparent not only from Judge Wilkey's dissent (Pet. App. 50a), but also from the majority's decision, which emphasized not only the fact that the NRC exercises general continuing supervision over TMI-1, but also the fact that the Commission now proposes to restart TMI-1 after having held that it lacked a reasonable assurance that the reactor could be operated safely. (Pet. App. 20a-21a). Since this proposal for federal action, the well established basis for the application of NEPA, would control even if the Court's broad language were invalid, review of that broad language would make no difference in the outcome of this case. Accordingly, the Commission is correct in its view that any questions allegedly raised by that language are not appropriate for certiorari review. This

of TMI-1 when reactor operation itself would have no significant impact on health. (Pet. App. 37a). Second, he doubted whether psychological health damage is sufficiently measurable to allow its consideration under NEPA. (Pet. App. 41a). Third, he asserted that the medically recognized psychological health damage alleged by PANE cannot be distinguished from less severe concerns or anxieties for purposes of determining whether NEPA applies (Pet. App. 42a-44a).

The most striking aspect of this case for purposes of deciding whether to grant certiorari is the complete absence of any facts in the record. PANE has never been given any opportunity to make even a threshold

---

Court would have no reason to consider such matters, which the NRC acknowledges to be outside the scope of the questions presented, because their resolution is not "necessary for the proper disposition of the case." Piper Aircraft Co. v. Reyno, 102 S.Ct. 252, 261, n. 12 (1981).

showing with respect to any issue, although the opinions of both NRC Commissioners Ahearne and Hendrie opposing consideration of PANE's contentions (Pet. App. 79a-91a) and Judge Wilkey's dissenting opinion (Pet. App. 31a-59a) rely heavily on factual assumptions.[19/]

The only area in which PANE has been permitted to make anything approaching a factual record is on the issue of whether the alleged psychological health damage is sufficiently measurable and quantifiable to be considered under NEPA. On the basis of PANE's Preliminary Plan for Presentation of Evidence

---

19/ In addition to the three factual assumptions discussed above with respect to Judge Wilkey's dissent, the unsupported factual assertions that have been relied upon by Judge Wilkey or Commissioners Hendrie and Ahearne to reject PANE's contentions include the following: (1) the proposition that it is not possible to mitigate the psychological health damage (Pet. App. 82a, 89a, NRC Pet. 24, n. 19), and (2) the proposition that the best way to alleviate the psychological health damage in the area is to assure that TMI-1 is safe when it is restarted (Pet. App. 79a, 82a-83a). See discussion at pages 55-62, infra.

on Psychological Distress and similar filings by other parties, the Licensing Board reached a threshold determination that this psychological health damage is sufficiently measurable.[20/] Ironically, PANE prevailed before the factfinding forum on the only issue on which any factual showing has been made, yet both the adverse Commission opinions and Judge Wilkey's dissent rely in part on their assumptions that this psychological health damage is not sufficiently quantifiable to be considered by the NRC.

20/ J.A. 88, Board Certification at 302, n. 8, J.A. 68.

REASONS THE PETITIONS SHOULD BE DENIED

The decision below meets none of the criteria for certiorari review. Contrary to the assertions of the petitioners, there is no basis for believing that the decision will apply elsewhere, that it will unduly burden federal agencies, or even that it will significantly burden the NRC in its consideration of TMI-1. The unique nature of Three Mile Island, the narrow scope of the decision, which the NRC itself has accepted, and the threshold requirements for raising NEPA issues will prevent widespread application of the decision to the NRC or other agencies.

There can be no conflict between this decision and those of other circuits since none has ever addressed this unique factual context or considered whether severe psychological health damage is cognizable under NEPA. To the contrary, the decision is

consistent with those emphasizing NEPA's central concern for the protection of human health. Indeed, the decision is consistent with the legal theory propounded in the Commission's petition, which asserts that any health damage must be proximately traceable to an impact on the physical or natural environment to be cognizable under NEPA. PANE believes that this psychological health damage is directly related to past physical impacts and to the prospect of similar damage or worse in the future, damage that the Commission concedes it must evaluate in its environmental impact statements. The Commission's petition raises the factual question of whether PANE is correct. Such a factual dispute is inappropriate for Supreme Court review prior to any consideration of the facts by the agency. In addition, the Commission's legal theory is incorrect. The decision below is entirely supported by the statute, the legislative

history, and the regulations of the Council on Environmental Quality.

Most important, this case arises in a posture wholly unsuited to Supreme Court review. Many factual questions beyond the expertise of counsel or the Court remain unanswered. It would be folly to venture into these uncharted waters until the parties have been given the opportunity to develop a factual record with which the Court can keep its bearings.

I. This Case Does Not Involve An Important Issue Of Federal Law Worthy Of Supreme Court Review.

A. The Decision Below Will Not Unduly Burden The NRC, The Federal Government In General, Or Even TMI-1 Itself.

Petitioners attempt to manufacture a basis for granting certiorari by asserting that the decision below would bring the federal government to a grinding halt by requiring agencies to consider psychological stress with respect to practically every

federal action imaginable. (NRC Pet. 27-29, Met. Ed. Pet. 15-20). These claims are baseless and transparently self-serving.

The ruling below is drawn very narrowly. In its own Statement of Policy, the NRC agrees that a narrow reading of the decision is correct.[21/] No other cases have arisen or been projected that would meet that test. And the threshold requirements established by this Court for determining NEPA applicability will prevent frivolous and unjustified consideration of alleged psychological issues.

The court below based its decision squarely and carefully on the distinctive character of the events at Three Mile Island. NEPA applies here because there is an impact on human health "in the wake of a unique and traumatic nuclear accident." The court emphasized that it applies because there are,

---

21/ 47 Fed. Reg. 31762-31763 (July 22, 1982).

at TMI, "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." (Pet. App. 16a-17a). The only event that meets that description is the accident at Three Mile Island and the subsequent proposed restart of TMI-1. In more than a decade of litigation under NEPA, not one other case has involved a comparable threat to human psychological health, although the federal government has engaged in a broader range of activities in that time than in any previous decade in history, including the sorts of activities identified by the NRC as threatened by this decision. (NRC Pet. 28). The proposition that this decision would extend to such activities is inconsistent with the decision itself and is sheer speculation.

The NRC itself has issued a Statement of Policy adopting the view of the court

below concerning the narrow applicability of the decision:

> As the Commission reads the opinion, the cognizability of psychological stress impacts under NEPA thus hinges on three elements. First, the impacts must consist of "post-traumatic anxieties", as distinguished from mere dissatisfaction with agency proposals or policies. Second, the impacts must be accompanied by physical effects. Third, the "post-traumatic anxieties" must have been caused by "fears of recurring catastrophe". This third element means that some kind of nuclear accident must already have occurred at the site in question, since the majority's holding was directed to "post-traumatic" anxieties and by fears of a "recurring" catastrophe. Moreover, the majority clearly had only serious accidents in mind, because of the use of the word "catastrophe" and its references to the "unique" Three Mile Island Unit 2 accident. In the Commission's view, the only nuclear plant accident that has occurred to date that is sufficiently serious to trigger consideration of psychological stress under NEPA is the Three Mile Island Unit 2 accident. Accordingly, only this accident can currently serve as a basis for raising NEPA psychological stress issues.

* * *

> Psychological stress contentions which do not satisfy these criteria should be held inadmissible.

47 Fed. Reg. 31762-31763 (July 22, 1982) (Emphasis supplied). On the basis of this Statement, NRC hearing boards have rejected psychological stress contentions in every case where the board has reached a decision on the issue since the Statement was issued,[22/] and they will undoubtedly do so in all other cases except TMI-1. Contrary to the fears of Judge Wilkey (Pet. App. 27a-29a) and Metropolitan Edison (Met. Ed. Pet. 9), the NRC has been perfectly capable of handling its docket in a manner that avoids frivolous contentions or any undue burden. Only if an accident as serious as TMI-2

22/ See, e.g., Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2) Dockets 50-440, 50-441 (July 19, 1982).

occurs elsewhere will the NRC or its hearing boards be required to address the issue.[23/]

Despite its agreement with the proposition that the decision below is to be applied very narrowly, the Commission now appears worried that some other court might disagree and require consideration of psychological health damage on a broader scale than intended by the D.C. Circuit. (NRC Pet. 27-28, n. 22). In effect, the Commission is telling this Court that while it believes that a correct interpretation of the decision below would result in a narrow application that would not extend beyond a TMI-2 type accident, it is worried that some other court may

---

23/ Even if the Petitioners were correct in their assertion that psychological health damage could be made an issue in all licensing proceedings, there is no basis for a claim that this would unduly burden the agency. The NRC handles virtually all such generic issues through rulemaking proceedings, which need not involve more than consideration of written comments after a relatively brief notice period. State of Minnesota v. NRC, 602 F.2d 412, 416 (D.C. Cir. 1979), Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519 (1978).

misread the decision and require consideration of psychological health damage when it should not do so. We cannot say that such an errant court decision is impossible. However, it is not the function of this Court to intervene in order to ease the mind of a federal agency that is concerned about what today is an entirely abstract and hypothetical proposition. The Monrosa v. Carbon Black Export, Inc., 359 U.S. 180, 184 (1959). Should that situation arise, Supreme Court review may then be appropriate.[24/]

In addition to the narrowness of the decision itself, the NRC and other federal

---

24/ We understand that an intervenor in the Commission proceeding cited at n. 22, supra, has challenged the Commission's Statement of Policy in the Sixth Circuit as the result of the denial of the intervenor's psychological stress contention. Sunflower Alliance Inc. v. NRC, Docket No. 82-3563 (6th Cir., filed Sept. 13, 1982). If a conflicting or unduly burdensome decision is reached in that case, it may then be time for review here. Moreover, a Sixth Circuit decision denying the contention would reinforce the narrow applicability of the decision below and confirm that there is no need for Supreme

agencies are protected by threshold requirements for consideration of issues under NEPA. An issue need not be considered if it is frivolous or if it has not been shown to fall within the scope of the statute. As this Court emphasized in approving the NRC's refusal to accept a vague contention that the alternative of energy conservation should be considered in a nuclear plant licensing proceeding,

> it is still incumbent upon intervenors who wish to participate to structure their participation so that it is meaningful, so that it alerts the agency to the intervenor's position and contentions.

Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 553 (1978). This standard is reflected in NRC regulations, which require that a prospective intervenor demonstrate a

---

Court involvement. We note, however, that the intervenor was not dismissed from the licensing proceeding. Several of its other contentions were admitted, and it remains a party. Under firm precedent, the appeal is interlocutory and will be summarily dismissed upon motion by the Commission. Ecology Action v. U.S.A.E.C., 492 F.2d 998 (2d Cir. 1974).

"basis" for litigating a contention. 10 C.F.R. §2.714(b). Doubtless the court below recognized the need for that sort of threshold showing when it considered the previous occurrence of a nuclear accident at Three Mile Island to be significant in deciding whether psychological health damage is cognizable under NEPA with respect to the restart of TMI-1. (Pet. App. 16a-17a). The requirement for the previous occurrence of a traumatic event provides the NRC with a clear and rational means of determining whether psychological health damage should be considered. It also eliminates any basis for concern that parties might delay agency action by successfully embroiling the agency in endless litigation on insubstantial claims. Under Vermont Yankee, the requirement constitutes a reasonable framework for structuring intervenor participation in order to determine whether or not their issues should be heard. Implemented under these established

principles, the decision below would be applied only at Three Mile Island and at other reactors suffering catastrophic accidents in the future. That would not be an undue burden on either the NRC or the federal government in general.

Finally, the Court should be aware that the decision below should not delay a final NRC decision concerning TMI-1 restart past the date that the reactor itself is physically able to operate. The first order of the court below was issued on January 7, 1982. No one disputes that TMI-1 was not ready to go into operation at that time. Within the month, "operating officials at Three Mile Island announced that leaks and corrosion in thousands of steam generator tubes in TMI-1 would probably delay the restart for six to twelve months." (Pet. App. 27a). In their petition here, Metropolitan Edison Co., et al., have claimed that TMI-1 will be

ready for operation before the end of 1982. (Met. Ed. Pet. 6). However, more recent information indicates that even the utility believes restart will not be possible until at least early 1983.[25/] Until then, the decision below will have had absolutely no independent impact on the timing of restart of the reactor.

Very soon after the January 7 order, the Commission began its examination of the psychological health issue. It held a workshop with nationally recognized experts in the field on February 4-5, 1982,[26/] and it held meetings with the utility, PANE, and other interested citizens shortly thereafter. A number of studies of the psychological effect of the accident were carried out after it occurred, and we understand that the NRC

25/ Harrisburg Patriot, August 25, 1982, at 23, col. 1.

26/ See Proceedings of the Workshop on Psychological Stress Associated with the Proposed Restart of Three Mile Island, Unit 1, NUREG/CP-0026, April 1982.

has been in contact with all of the scientists involved. It has had every opportunity to move expeditiously in order to make the determination required by the decision below. There is no justification for its failure to do so. There should be no reason that the Commission could not complete that effort and any further administrative proceedings that may be required, including a possible adjudicatory hearing, before the necessary repairs are completed at TMI-1. As Commissioner Gilinsky has said,

> The Commission should, by any reasonable standard, be able to decide this question by the end of this summer.27/

The end of the summer has now passed. It has become increasingly apparent that any delay in the possible restart of TMI-1 would not result from the actions required by the

---

27/ Metropolitan Edison Co., (Three Mile Island Nuclear Station, Unit No. 1), CLI-82-13, Docket No. 50-289 (Restart) (July 16, 1982), Separate Views of Commissioner Gilinsky.

court's decision below, but from the Commission's failure to act promptly and efficiently in taking those actions. Indeed, Commissioner Gilinsky has suggested that the Commission is delaying action precisely in order to preserve the case for review by this Court:

> The difficulty seems to be that the Commission is more interested in keeping PANE v. NRC a live controversy in order to justify Supreme Court review than in concluding the TMI-1 case.28/

It is inappropriate for this Court to burden its increasingly heavy docket with a case that presents hypothetical concerns such as those raised by Petitioners.

28/ Id. Commissioner Gilinsky also expressed strong doubts that the decision below would have any adverse effect on nuclear power.

B. The Decision Below Is Unique And Is Not In Conflict With Any Other Decisions Of The Courts Of Appeals.

Both Petitioners argue that the decision below "is contrary to decisions of every other court of appeals that has considered the issue," and with a decision of the District of Columbia Circuit. (NRC Pet. 24-27, Met. Ed. Pet. 10-15). They are incorrect. There can be no such conflict when no court of appeals, or district court for that matter, has ever before addressed the issue raised in this case.

The question here is whether NEPA governs medically and scientifically recognizable harm to human psychological health where there has been (1) previous actual exposure to radiation, (2) previous significant threat of massive damage to the physical environment from the same sort of federal action--approval to operate a nuclear reactor --that is now being proposed, (3) previous

damage to human psychological health, and (4) an acknowledgment by the Commission that the risk of massive damage to the physical environment in the future from reactor operation is sufficient to require consideration under NEPA.[29/] None of the cases discussed remotely approaches this situation. In particular, none involves an alleged threat to human health.[30/]

The cases cited as conflicting with the decision below fall into two categories.

29/ See Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969, 45 Fed. Reg. 40101, et seq. (June 13, 1980), in which the Commission determined, as a result of the TMI accident, that its environmental impact statements must henceforth include consideration of the environmental effects of accidents involving releases of radiation to the environment.

30/ By contrast, the decision below is supported by and consistent with decisions requiring the consideration of human health impacts under NEPA. See, e.g., Citizens Against Toxic Sprays v. Bergland, 428 F. Supp. 908 (D. Ore. 1977); Sierra Club v. Coleman, 405 F. Supp. 53 (D. D.C. 1975); and National Organization for the Reform of Marijuana Laws v. U.S. Department of State, 452 F. Supp. 1226 (D. D.C. 1978).

The first category includes Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973), First National Bank of Chicago v. Richardson, 484 F.2d 1369 (7th Cir. 1973), and Maryland-National Capital Park and Planning Commission v. U.S. Postal Service, 487 F.2d 1029 (D.C. Cir. 1973). These involve the siting of a correctional facility in a city, and an alleged influx of low-income workers to staff a postal facility. All use terminology such as "psychological factors," although none involves allegations of actual damage to human psychological health, as distinct from general concern or uneasiness.

The courts in Hanly and Richardson only questioned whether such vague psychological considerations are cognizable under NEPA. Neither court actually ruled on the point, and the Hanly court explicitly stated that it did not need to decide the issue. Hanly v. Kleindienst, supra, 471 F. 2d at 833;

First National Bank of Chicago v. Richardson, supra, 484 F.2d at 1380, n. 13. In the Maryland case, the court's reference to "psychological factors" was actually in the context of a discussion of aesthetic effects. Maryland-National Capital Park and Planning Commission v. U.S. Postal Service, supra, 487 F.2d at 1038. The court was not faced with and did not rule upon any sort of psychological effect.

Moreover, to the extent that these courts expressed doubts about consideration of psychological factors, those doubts were based primarily on concerns about whether the factors are sufficiently measurable to be considered under NEPA.[31/] By contrast,

---

31/ We note that the Commission, in quoting from Hanly, failed to continue the sentence and thus failed to inform this Court that the Second Circuit's doubts arose from concerns about whether psychological factors were sufficiently measurable. (NRC Pet. 25). By doing so, the NRC left the misimpression that the court had adopted the theory contained in the preceeding sentence of the NRC's petition. The court did no such thing.

in this case the Licensing Board has already reached a threshold ruling that the serious psychological health damage at issue here is sufficiently measurable to be considered by the Commission.[32/] More important, the question of whether the psychological health damage in this case is sufficiently measurable is one of fact for which this Court has no basis for judgment beyond the view of the Licensing Board.[33/] PANE would prove the measurability in considerably more detail if given the opportunity to do so.

32/ Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), LBP-80-8, 11 NRC 297, 302 n. 8 (1980), J.A. 68.

33/ In addition to the measurability issue, the Richardson court questioned whether "public 'sensibilities'" about a jail would be cognizable in the absence of evidence that the safety of the neighborhood is actually threatened. 484 F. 2d at 1380, n. 13. It also emphasized that there had been no previous disturbances at the existing jail to give rise to legitimate concerns. This case does not involve mere public sensibilities, but an acknowledged threat to human health that arises from an actual prior physical threat and the prospect of such a threat in the future from the proposed action.

The second category of cases allegedly in conflict with this decision involves purely social or economic decisions to eliminate or reduce jobs, displace tenants from a building, or locate low income people in an area for job training or residential purposes. Breckinridge v. Rumsfeld, 537 F. 2d 864 (6th Cir. 1976), cert. denied, 429 U.S. 1061 (1977); Image of Greater San Antonio, Texas v. Brown, 570 F.2d 517 (5th Cir. 1978); Goodman Group, Inc. v. Dishroom, 679 F.2d 182 (9th Cir. 1982); Como-Falcon Community Coalition, Inc. v. Department of Labor, 465 F. Supp. 850, aff'd, 609 F.2d 342 (8th Cir. 1979), cert. denied, 466 U.S. 936 (1980); Nucleus of Chicago Homeowners Association v. Lynn, 524 F.2d 255 (7th Cir. 1975), cert. denied, 424 U.S. 967 (1976). There was no hint in any of these cases of damage to human health, which is the issue here. None of these cases involved a previous actual and threatened physical impact on the

environment related to the concern raised by those parties, as is true here. And none involved a concern related to the prospect of further devastating impact on the physical environment arising from the same federal action that resulted in a prior physical impact. In at least one of these cases there was a factfinding in which it was determined that the issues involved social and economic impacts that would not significantly alter the character of the neighborhood. Como-Falcon Community Coalition, Inc. v. Department of Labor, supra, 609 F.2d at 346. No such fact finding has been permitted here.

Finally, both petitions rely heavily on Judge Wilkey's assertion that the majority's attempt to distinguish this decision is invalid because it is not possible to distinguish among psychological reactions so that "if NEPA embraces fears and anxieties in one [case], it must in all." (Met. Ed.

Pet. 14-15, NRC Pet. 26-27). Since Judge Wilkey could not distinguish among such reactions, he concluded that the cognizability of psychological effects under NEPA cannot be determined by the severity of the effect. Judge Wilkey was simply wrong as a matter of fact, and he rejected PANE's arguments largely on that factual basis, although we had never been given an opportunity to make our case. While Judge Wilkey, the Petitioners, and even this Court, as laypeople, may sense that any psychological reaction, including worry or fears concerning proposed jails or low-income residents, has an impact on psychological health, that is not the case as a matter of scientific fact. If allowed to, we would prove that such reactions do not involve impairment of health, while those at issue here are of an entirely different quality that are considered to be pathological and that do harm human

health.[34/] Medicine and science have recognized tools and standards for distinguishing genuinely ill people from those who are simply worried, or those who are malingering or acting for political reasons. It would be inappropriate and unwise for this Court to accept review based upon an alleged apparent conflict among the circuits when the situations of the cases are factually distinct on their face, and when this Court has no factual record from which to determine, as Petitioners suggest, that the distinction asserted by the majority below is invalid.

34/ It is important to note that we would also demonstrate that the distinction often drawn between psychological and physical health is a wholly artificial one that is understandable for the non-scientific layperson, but that is entirely inaccurate. The concept of health involves the entire human organism, with mental and physical effects so interrelated that it is scientifically incorrect to draw a sharp distinction.

C. The Commission's Argument On The Merits Depends On A Question Of Fact And Ignores The Statute, Legislative History, And Governing Regulations.

The primary argument of the Nuclear Regulatory Commission appears to be that the decision below should be reviewed because it is incorrect on the merits. The Commission's argument fails for two reasons. First, even under the unduly narrow interpretation of NEPA asserted in the Commission's petition, the decision below is correct as applied to the facts of this case. Second, the Commission is wrong on the merits. The decision below is fully supported by the statute, the legislative history, and the regulations of the Council on Environmental Quality.[35/]

35/ In any event, the question of the validity of the decision below does not by itself justify a grant of certiorari unless there is an important question of federal law involved. Since the decision below will not have a widespread impact and does not involve a conflict among the circuits, it does not raise such a question.

1. The Commission's argument depends on a question of fact that is not appropriate for review in this court.

The Commission focuses on the term "environmental" impact in Section 102(2)(C)(i) of NEPA, 42 U.S.C. §4332(2)(C)(i), and argues that the psychological health damage here, no matter how serious, is not cognizable under NEPA because it is not "proximately traceable to the impact of the federal action on the natural and physical environment." (NRC Pet. 18-24). Assuming the Commission's legal theory is correct, the decision below is consistent with that theory, and the Commission has raised a question of fact that has not been addressed below and is not appropriate for consideration by this Court.

The population surrounding Three Mile Island is the only population in the nation that has been subjected to the physical reality of a nuclear reactor accident, including actual exposure to radiation that

may cause serious physical health effects, including genetic damage.[36] The restart of TMI-1 poses the risk of a further accident and further, perhaps greater, exposure to radiation--a direct physical impact of the sort required by the Commission's legal theory.[37]

36/ See discussion, supra, at page 7.

37/ Metropolitan Edison Co., et al., claim that "the actual safety of TMI-1 was exhaustively considered in the restart hearing." (Met. Ed. Pet. 12, n. 12). They imply that the facility must therefore be considered safe such that an accident similar to TMI-2 in severity could not occur again. The NRC makes a similar point by arguing that the psychological health damage here arises from "political facts" distinct from the radiation or accident potential associated with plant operation. (NRC Pet. 22). The point of both arguments is that psychological health damage related to the restart of Unit 1 cannot be considered because there is no realistic probability of an accident. That may be a reasonable argument at other reactors, but it is not true at Three Mile Island. The people of that area were given exactly the same assurances based on extensive safety reviews before TMI-2 went into operation. Yet they were subjected to an entirely unexpected accident--previously considered "incredible" by the NRC and the nuclear industry--only three months later. This is not merely a political fact, but a physical reality. It is entirely reasonable of this population to expect a similar accident at TMI-1 even after the NRC gives its soothing assurances.

In the wake of the TMI-2 accident, the Commission itself has now recognized that its environmental impact statements must include consideration of accidents such as TMI-2, or worse, in which the public is exposed to releases of nuclear radiation.[38/] This is consistent with and required by substantial NEPA authority holding that an agency must consider the reasonably forseeable environmental consequences of its actions.[39/]

The court below took the risk of another accident into account when it based its decision in part on the fact that a nuclear accident involves the "holocaust potential"

38/ See n. 29 at page 33, supra.

39/ See, e.g., Concerned About Trident v. Rumsfeld, 555 F.2d 817, 830 (D.C. Cir. 1977); Carolina Environmental Study Group v. U.S., 510 F.2d 796, 798-99 (D.C. Cir. 1975). In the latter decision, the court upheld the Commission's refusal to consider the consequences of serious nuclear accidents. As the Commission's recent reversal of that position, n. 29 and 38, demonstrates, the accident at TMI-2 has conclusively established that such an accident is forseeable to the extent that it must be considered under NEPA.

of enormous damage to the human environment. (Pet. App. 13a-15a). That holocaust potential, which the Commission itself now recognizes that it must consider in its environmental impact statements, is precisely the sort of impact on the natural or physical environment that the Commission argues must be the proximate cause of any psychological health damage to be considered under NEPA. Accordingly, the decision below is consistent with the Commission's legal theory.[40/]

The Commission's true argument here is not one of law, but of fact. The Commission believes as a matter of fact that any psychological health damage that might result from restarting TMI-1 is not proximately traceable to the physical impacts of restarting, which

---

40/ Moreover, allowing restart involves the same physical impacts as issuance of a normal operating license. 10 CFR §51.5(a)(2) requires the preparation of an EIS prior to the issuance of any operating license.

include the risk of a future accident. PANE disagrees.[41/] However, the point here is not who is correct on this factual issue, but that this factual issue is central to the Commission's argument. There has been no record developed before the Commission or the court below. There is no basis for a reasoned decision by this Court. In this posture, this case is utterly inappropriate for consideration by the Supreme Court.

41/ The NRC is incorrect in suggesting that PANE's allegation involves psychological health damage as a result of the mere existence of TMI-1 regardless of any environmental impact it might have. (NRC Pet. 20). It is the operation of TMI-1, carrying with it the potential for precisely the sort of physical impact that has already occurred in the TMI-2 accident (or worse), that gives rise to the psychological health damage. If PANE could be assured that TMI-1 would simply exist without ever operating again, the same health damage would not occur.

2. The decision below is consistent with and fully supported by the statute, the legislative history, and the governing regulations.

Not only does the Commission ignore the fact that the psychological health damage at issue here is directly related to past and reasonably forseeable physical impacts, its argument that such impacts are required to trigger NEPA is incorrect under the language of the statute and the express intent of the CEQ regulations.[42/] The Commission's reliance on the term "environmental" impacts at 42 U.S.C. §4332(2)(C)(i) ignores the scope of the statute. NEPA governs major Federal actions "significantly affecting the quality of the human environment." 42 U.S.C. §4332(2)(C) (Emphasis supplied).

42/ The Commission also cites several decisions of this Court in this discussion. However, none analyzes the scope of NEPA. They simply repeat the word "environmental" from the statute without examining its meaning in a manner useful to this case.

There is no language in NEPA that will support limiting consideration of human environmental impacts to impacts on the natural or physical environment. Indeed, the word "physical" does not appear at all.

The essential purpose of NEPA is to improve and protect the harmony between man and his overall environment. As Senator Jackson noted,

> An environmental policy is a policy for people. Its primary concern is with man and his future.

115 Cong. Rec. S17451 (daily ed. December 20, 1969), reprinted in I Legislative History of the National Environmental Policy Act of 1969 at 495 (1970) (hereafter "Legislative History"). More important with respect to this case, Senator Jackson strongly emphasized the intended broad scope of NEPA:

> A national policy for the environment is thus above all else a national policy for the welfare and survival of man.

* * *

> A national environmental policy would . . . necessarily be concerned with natural resource issues. But the total environment needs of man--ethical, esthetic, physical, and intellectual, as well as economic--must be taken into account.

115 Cong. Rec. S1784, 1787 (daily ed. February 18, 1969), I Legislative History at 394, 397.[43/]

This emphasis on a broad understanding of the scope of NEPA is reflected not only in the reference to "human environment,"

43/ The Commission cites other remarks of Senator Jackson, in which he provided a comprehensive list of perceived environmental matters to be governed by NEPA, for the proposition that all environmental impacts, including psychological health damage, must be "rooted in a discernable impact upon the natural or physical environment." (NRC Pet. 22-23, n. 18). The language cannot be stretched that far. Senator Jackson's reference to "conditions within our central cities which result in civil unrest and detract from man's social and psychological well-being" is not by its terms limited to physical conditions. Neither are "faltering and poorly designed transportation systems" or "poor architectural design and ugliness" impacts on the physical or natural environment. They reflect a broad concern with the overall quality of the human environment in all of its aspects, and particularly concerns with improving the quality of human life in the context in which we live.

but also throughout the statute. For example, it is the intent of NEPA to

> encourage productive and enjoyable harmony between man and his environment,

42 U.S.C. §4321, and to

> assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.

42 U.S.C. §4331(b)(2).

The Commission notes that this broad understanding of the human environment was adopted by the Council on Environmental Quality, but the Commission attempts to argue that CEQ would not consider health effects to be cognizable under NEPA unless they were traceable to the impact of Federal action on the natural and physical environment. (NRC Pet. 19-20, n. 14). The Commission is absolutely incorrect. The regulations in question, 40 C.F.R. 1508.8 and 1508.14, establish that the "effects" of Federal actions governed by NEPA include effects

on human health, and that the term "human environment" is to be "interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment." Contrary to the position taken by the Commission, CEQ clearly stated in the preamble when it issued these regulations that it did not intend to limit the term human environment as the Commission wishes:

> A few commenters expressed concern that this definition could be interpreted as being limited to the natural and physical aspects of the environment. This is not the Council's intention.

43 Fed. Reg. 55988 (November 29, 1978).[44/]

44/ Both that preamble and section 1508.14 itself exclude "economic or social effects" from the class of effects that trigger the application of the EIS requirement. Under normal canons of construction, CEQ did not intend to extend this exclusion to any other types of effects. Id. at 55988-55989. CEQ did not equate human health effects with economic or social effects. Although CEQ included health effects in section 1508.8 as among the effects governed by the statute, it did not specifically list them in the exclusion language of section 1508.14 on which the Commission relies.

The Council's inclusion of health effects as environmental effects that trigger NEPA is consistent not only with the emphasis on benefiting human beings, as demonstrated by the statutory and legislative material cited above, but also with the emphasis throughout the statute on the protection of human health. Under 42 U.S.C. §4321, one of the purposes of NEPA is to "stimulate the health and welfare of man." In Section 101(c) of NEPA, 42 U.S.C. §4331(c), Congress explicitly recognized

> that each person should enjoy a healthful environment . . . .

Indeed, Judge Wilkey recognized that "NEPA's requirements extend to effects on human health" (Pet. App. 35a), and at least one court has stated that

> No subject to be covered by an EIS can be more important than the potential effects of a federal program upon the health of human beings.

Citizens Against Toxic Sprays v. Bergland, 428 F. Supp. 908, 927 (D. Ore. 1977).

This case involves a significant impact on human health that would be caused by altering the human environment of the Three Mile Island area through the restart of TMI-1. The distinguishing feature of that human environment is the existence of a population that has been traumatized by the accident at Unit 2 and that would be seriously threatened with additional and permanent psychological health damage if Unit 1 were reopened. Three Mile Island Unit 1 is part of that human environment. Restart of that reactor would significantly affect the human environment of that area by significantly altering the psychological context for local residents and causing widespread damage to human health, one of the primary concerns of NEPA.[45/] This is precisely the sort of

---

45/ The fact that this health damage derives from an alteration of the human environment is most clearly

relationship between people and their environment that is referred to in the CEQ regulations.[46/] 40 C.F.R. §1508.14. It is also precisely the sort of situation in which CEQ did not intend to limit NEPA to purely physical impacts.

---

illustrated by the fact that if people were to move away--to a different human environment--they would not suffer the same damage to their health upon the restart of TMI-1.

46/ This situation is also completely unlike the example posed by the Commission, in which the Food and Drug Administration acts to approve the sale of drugs that affect human health. (NRC Pet. 21, n. 16). The action of the FDA does not affect the human environment of any particular area or community, either physically or psychologically. It does not serve to define or to alter the area in which we live, either locally or nationally. It also does not involve the potential for actual physical impacts of "holocaust" proportions on the environment, which was a primary concern to the court below. It is a distortion of the decision below to suggest that its logic could be applied to FDA. Nonetheless, it should be noted that at least the FDA examines the health impact of its actions before it takes them; that is the essence of its statutory mandate. That is precisely what the NRC is trying to avoid here with respect to what is acknowledged to be the only significant human health impact to date of the TMI-2 accident.

II. The Facts Have Been Inadequately Developed To Allow Proper Consideration By This Court.

We have previously emphasized the lack of any factual record on which the court below or this Court could base conclusions concerning a broad range of disputed issues.[47] The majority reached its decision based on our allegations. This approach, which is closely analogous to summary judgment treatment of an issue, is the correct one in a case such as this where no factual record exists. This treatment is particularly appropriate with respect to determining whether an issue is cognizable under NEPA since a properly supported allegation is sufficient to require agency consideration. Foundation for North American Wild Sheep v. U.S. Department of Agriculture, 681 F.2d 1172, 1177-78 (9th Cir. 1982). By contrast, Judge Wilkey and the petitioners here rely

---

47/ See discussion, supra, at 14-16.

heavily on factual assertions for which there is no record support and which are outside the expertise of either the Petitioners, the court below, or the Supreme Court. In light of the widespread influence that a Supreme Court decision in the area of psychological health would have not only with respect to NEPA, but with respect to all areas in which psychological health is addressed, it is vitally important that the Court withhold consideration of the issue until the factual record has been fully developed.

The major disputed factual issues here fall into two categories, those that bear on the substantive question of the scope of NEPA, and those that purport to support arguments that the decision below will have widespread applicability and pose an undue burden on the federal government.

The major factual issues in the first category are:

(1) The question of whether serious psychological health damage is nonetheless so difficult to measure or quantify that it is not cognizable under NEPA. (Pet. App. 40a-41a, Met. Ed. Pet. 11-12, 17-18). The Licensing Board made a threshold finding that it is measurable, but Judge Wilkey would have ruled it is not.

(2) The question of whether there is a distinction between minor psychological conditions such as worry or fear and those alleged here, involving threats to human health. Judge Wilkey seems to believe that there is an unbroken continuum such that the applicability of NEPA cannot be based on the severity of a psychological condition. (Pet. App. 41a-44a). Although that proposition may seem logical to a layperson, it is incorrect. We would prove the contrary.

There is a distinction between a fear reaction to the location of a jail and the pathological conditions that exist at Three Mile Island and that would be caused by the restart of TMI-1,

(3) The Commission emphasizes the importance of mitigation under NEPA and cites Commissioner Hendrie for the proposition that mitigation is not possible in the area of psychological health damage. (NRC Pet. 24, n. 19). In the alternative, Commissioner Hendrie has argued that the best way to mitigate the psychological health damage is by assuring the safety of the reactor. (Pet. App. 83a). Commissioner Hendrie has no training in this area, and there

is no record support for these claims. We expect to prove the contrary, particularly that there are a number of actions that could be taken to mitigate the health damage tc some degree.

The major factual assertions relied upon to argue that the decision below would have widespread impact are:

(1) The proposition that "any special interest group . . . could whip up sufficient hysteria" to create psychological health damage that would trigger the applicability of NEPA under the majority's decision. (Pet. App. 38a, Met. Ed. Pet. 18). The claim is incorrect. We would show the contrary if allowed to make a factual record. There is a qualitative distinction between political concerns that might be created by a special interest group and the health concerns at issue here.

(2) The proposition that the health effect here is caused by mere fear rather than by the federal action itself.[48/] (Pet. App. 37a, Met. Ed. Pet. 18-19). This grossly oversimplifies reality. The existing psychological damage in the area is a health reaction that is not necessarily related to prior fears or opinions about nuclear power. The psychological damage related to restarting Unit 1 arises primarily from the psychological vulnerability caused by the accident at Unit 2. Mere fears that exist in other areas are not of the same character as the psychological vulnerability at Three Mile Island.

48/ Judge Wilkey also appears to assume that human health does not encompass psychological health when he argues that PANE would have the NRC consider fears of TMI-1 regardless of the effect of the reactor on human health. (Pet. App. 37a). This reasoning is circular. If human health encompasses psychological health, as this Court has consistently held, United States v. Vuitch, 402 U.S. 62 (1971), restarting TMI-1 does affect human health.

In these and other areas, this Court has no factual record to guide its consideration. If it were to accept this case, it would be forced to speak from ignorance on several issues. It would risk issuing a decision that was profoundly in error in its underlying factual assumptions. Yet that decision would undoubtedly influence the development of the law related to psychological health not only under NEPA, but also in the areas of tort litigation, criminal defense, and all others where related questions might arise.

The NRC is in the process of developing a factual record. We hope to prove that the factual assumptions stated above are inaccurate and to provide material that would allow the NRC or a court to reach reasoned conclusions consistent with current scientific knowledge. In this situation the Court should not grant certiorari. It should wait while the facts are developed. If Supreme

Court review of this issue is ever requested again, there may then be a record for decision.

As we have argued, supra, p. 19-31, this issue will arise only in the rarest and most extraordinary circumstances. We expect the Sixth Circuit, in the litigation noted earlier at n. 24, to reject the proffered contention in that case for the reasons stated in the Commission's Statement of Policy and supported by the decision below. That event will confirm our arguments here. If we are wrong, and the Sixth Circuit accepts the contention, or if it issues an opinion that conflicts with the decision below, then the time may be right for Supreme Court review. That is not the case today.

CONCLUSION

The petitions for writs of certiorari should be denied.

Respectfully submitted,

William S. Jordan, III
Counsel of Record

Ellyn R. Weiss
HARMON & WEISS
1725 I Street, N.W.
Suite 306
Washington, D.C. 20006

(202) 833-9070

September 30, 1982

Office - Supreme Court, U.S.
FILED
OCT 7 1982
ALEXANDER L. STEVAS,
CLERK

No. 81-2399, No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY,
and PENNSYLVANIA ELECTRIC COMPANY, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and THE UNITED STATES OF AMERICA, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

REPLY BRIEF OF PETITIONERS METROPOLITAN EDISON COMPANY, ET AL.

Of Counsel:
JAMES B. LIBERMAN
DEBEVOISE & LIBERMAN
26 Broadway
New York, NY 10004
(212) 248-6900

JAMES B. HAMLIN
Counsel of Record
GEORGE F. TROWBRIDGE
JOHN B. RHINELANDER
DEBORAH B. BAUSER
SHAW, PITTMAN, POTTS & TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Attorneys for Petitioners
Metropolitan Edison Company, et al.

October 7, 1982

PRESS OF BYRON S. ADAMS PRINTING, INC., WASHINGTON, D.C.

TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	i
TABLE OF AUTHORITIES	ii
ARGUMENT	2
I. NEPA Does Not Encompass Public Fears Of Federally Licensed Projects	2
II. The Commission's Statement Of Policy Does Not Obviate The Need For Supreme Court Review	4
III. Further Factual Development Of The Case Is Unnecessary And Undesirable	7
CONCLUSION	10

TABLE OF AUTHORITIES

CASES: Page

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978) 5

STATUTES:

National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.* ..... *passim*

MISCELLANEOUS:

Rule 12(b)(6), Fed. R. Civ. P. 8

Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI (Oct. 1979) 3

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399, No. 82-358

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY,
and PENNSYLVANIA ELECTRIC COMPANY, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and THE UNITED STATES OF AMERICA, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

REPLY BRIEF OF PETITIONERS METROPOLITAN EDISON COMPANY, ET AL.

Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company, petitioners in No. 81-2399 (hereinafter "private petitioners"),[1] submit this reply brief in response to the brief filed by respondent People Against Nuclear Energy ("PANE") in opposition to the petitions for a writ of certiorari.

---

[1] In compliance with Supreme Court Rule 28.1, the parent and affiliate corporations of the private petitioners were listed on page i of their petition for a writ of certiorari.

ARGUMENT

I. NEPA Does Not Encompass Public Fears Of Federally Licensed Projects

Throughout its brief PANE makes a number of arguments apparently intended to establish a link between the psychological distress it alleges and some direct physical impact on the natural environment. *See, e.g.*, PANE brief at 18, 24-26. In particular, PANE asserts that its members have suffered "actual exposure to radiation that may cause serious physical health effects, including genetic damage" as a result of the TMI-2 accident; that restart of TMI-1 carries with it the potential for a "holocaust"; and that this is "precisely the sort of impact on the natural or physical environment" that is necessary to trigger the National Environmental Policy Act, 42 U.S.C. § 4321 et seq. ("NEPA").[2] PANE brief at 42-43, 45. These arguments confuse the issues actually presented by this case.

This is not a tort action to recover for personal injuries or emotional distress caused by the accident at TMI-2. The issue is not what radiation was released from TMI-2,

---

[2] The American Psychological Association ("APA") has filed an *amicus curiae* brief in support of PANE that takes a slightly different tack. The APA argues that normal operation of TMI-1 will have a direct physical impact on the environment through the "dramatic alteration of conditions of temperature and pressure within the reactor and through other physical effects of reactor operation." APA brief at 14. The APA has clearly misunderstood PANE's contentions. PANE itself has never sought to link its psychological distress with the physical effects of normal operation. Rather, PANE's contentions speak in terms of "a reoccurrence of the accident," and the "spectre of disaster." This case involves not the effects of normal operation, but, in Judge Wright's words, psychological distress "caused by fears of recurring catastrophe" at TMI-1. 678 F.2d at 230.

nor what stress may have resulted from the accident.[3] Rather, the issue raised by PANE's contentions is what psychological distress would be caused by restart of TMI-1. Thus the task forced on the Commission is to *predict* the psychological reaction to a future event, not to *measure* the emotional injury caused by an incident in the past.

Furthermore, the actual safety of TMI-1 is not in issue here. That subject was thoroughly covered in an evidentiary hearing lasting more than six months. PANE chose not to participate in that process and in fact admitted to the Licensing Board below that the point of its contentions is not "the actual safety threat of TMI Unit 1," since PANE's members allegedly will suffer stress from the operation of the plant "regardless of whether TMI Unit 1 were absolutely safe."[4] Thus PANE has no interest in determining whether there is in fact the potential for a "holocaust" at TMI-1. Instead, PANE and the

---

[3] PANE's brief leaves the reader with the impression that both of these effects were quite severe. Yet the Report of the Kemeny Commission, upon which PANE relies heavily, concludes that the psychological distress resulting from the TMI-2 accident was "short-lived" and that the radiation released off-site was so low that it will cause "no case of cancer or the number of cases will be so small that it will never be possible to detect them." The Kemeny Commission found that the maximum estimated radiation dose received by any one individual was less than annual natural background radiation, and the average dose to a person living within 5 miles of the plant was no more than 10% of the annual background radiation. Report of the President's Commission on the Accident at Three Mile Island at 12, 13, 34 (Oct. 1979) (Joint Appendix in the court of appeals at 258, 259, 266).

[4] PANE's Reply Brief on Psychological Distress Issues at 12 (Joint Appendix in the court of appeals at 225).

court of appeals would have the Commission consider the "fears of recurring catastrophe" at TMI-1 wholly without regard to the actual impact or safety of the plant. The private petitioners believe that NEPA should not be extended to encompass fear of a federal licensing decision, as opposed to the actual environmental effects of the decision itself.

II. The Commission's Statement Of Policy Does Not Obviate The Need For Supreme Court Review

PANE argues that the petitions should be denied because of the Commission's Statement of Policy narrowly construing the court of appeals' decision.[5] PANE brief at 19-25. PANE believes that the decision below will be confined to Three Mile Island and that Supreme Court review is therefore unwarranted. The Statement of Policy does nothing, of course, to protect other federal agencies, and it is significant that Judge Wright's majority opinion is sufficiently broad and threatening that a number of organizations within and without the nuclear industry expended the time, money and effort necessary to file *amicus curiae* briefs.[6] Even within the nuclear industry the effect of the Statement of Policy is uncertain. We note that the Solicitor General has stated in his petition that, notwithstanding the Statement of Policy, "as long as the court of appeals' decision stands, any Commission ruling

---

[5] 47 Fed. Reg. 31,762 (July 22, 1982). The Statement of Policy was issued after the private petitioners filed their petition in this Court.

[6] *Amicus curiae* briefs in support of the petitions have been filed by the National Association of Manufacturers, American Mining Congress, Chamber of Commerce, Scientists and Engineers for Secure Energy, National Rural Electric Cooperative Association, Edison Electric Institute and Atomic Industrial Forum.

excluding psychological stress contentions from a proceeding runs a substantial risk of reversal, for the reasons suggested by Judge Wilkey's dissent." NRC petition at 28 n.22. What is certain is that the court of appeals' decision will generate continuous litigation. In two separate NRC licensing proceedings, intervenors have already challenged the Statement of Policy as invalid.[7] In one of those cases, the intervenor has filed a petition for review in the United States Court of Appeals for the Sixth Circuit asking that the Statement of Policy be set aside. *Sunflower Alliance, Inc. v. NRC*, No. 82-3563 (6th Cir., filed Sept. 13, 1982). Unless the decision below is reversed, Judge Wright's majority opinion is likely to cause mischief in NRC licensing proceedings for years to come.[8]

Furthermore, even if the court of appeals' decision were effectively limited to Three Mile Island, the injury to the private petitioners is sufficiently extreme to justify Supreme Court review. PANE would have the Court believe that the Commission can comply with the lower court's judgment quickly and easily, without delaying restart of TMI-1 or otherwise prejudicing the private petitioners. PANE brief at 28-31.[9] To say that an agency

---

[7] *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), NRC Docket Nos. 50-440, 50-441; *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), NRC Docket Nos. 50-400, 50-401.

[8] This is particularly true because of the important role of the District of Columbia Circuit in reviewing administrative agency decisions. *Vermont Yankee Nuclear Power Co. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 536 n.14 (1978).

[9] The private petitioners take strong exception to the use that PANE makes of a quotation from Commissioner Gilinsky on page 30 of its brief. PANE gives the impression that Mr. Gilinsky believed all

conceivably could comply with an erroneous court decision is not to say that Supreme Court review is unwarranted. Moreover, such compliance is likely to result in a disastrous delay in restarting TMI-1.

If the Commission decides, as PANE insists, that under the terms of the court of appeals' decision a supplemental EIS is required, the ensuing NEPA process could be endless. PANE would first have the NRC conduct a further "predictive" field study and consider additional "clinical evaluations," which PANE itself assumes would require four months.[10] These studies would then have to be factored, along with the numerous post-accident stress studies already conducted by others, into a draft EIS, including a new cost-benefit balance. Under NEPA requirements, the draft statement would have to be published for comment and circulated to the Council on Environmental Quality and other government agencies. A final EIS reflecting comments received would then have to be issued. PANE has insisted before the Commission, citing NEPA, the Atomic Energy Act and the Commission's regulations, that the Commission must then hold an "adjudicatory trial-type" hearing on the psychological stress issue.[11] Such a hearing under NRC regula-

---

steps associated with the psychological stress evaluation could be completed by the end of the summer. Yet taken in context, Mr. Gilinsky's statement clearly refers *only* to the initial decision of whether a full environmental impact statement ("EIS") is necessary. He did *not* state or imply that the entire process could be completed by the end of the summer. *Metropolitan Edison Company* (Three Mile Island Nuclear Station, Unit No. 1), CLI-82-13 (July 16, 1982) (Separate Views of Commissioner Gilinsky, at 1).

[10] PANE Response to Licensee's Motion with Respect to Psychological Health Issue, filed with the Commission on June 3, 1982, at 5.

[11] *Id.* at 5-19.

tions involves, like the TMI-1 restart hearings already conducted, use of discovery, opportunity for numerous procedural motions, hearing testimony and cross-examination, proposed findings of fact and conclusions of law, preparation of an initial decision by a Licensing Board, and review of that decision by the Commission.[12] Private petitioners' counsel estimates, on the basis of experience in the TMI-1 restart hearing and extensive experience in other NRC licensing proceedings, that the procedures proposed by PANE, beginning with an NRC determination to require a supplemental EIS, would take a minimum of 18 months, without allowance for contingencies.[13] PANE's representation to the Court that it should be possible for the Commission to complete administrative proceedings, including an adjudicatory hearing, by early 1983 is disingenuous in the extreme.

III. Further Factual Development Of The Case Is Unnecessary And Undesirable

PANE also argues that the petitions should be denied because it believes the facts of the case have been inadequately developed. PANE brief at 55-62. PANE asks that it be given an opportunity to present its evidence and make a factual record before the Commission. This is but a restatement of PANE's earlier argument that the petitioners should comply with the lower court's decision

---

[12] Following these proceedings before the NRC, it is likely that the matter would end up again in the court of appeals, where further delay can be expected.

[13] The TMI-1 restart hearing to date, beginning with the notice of hearing on August 9, 1979, until completion of the Licensing Board's initial decisions, took almost 36 months. Commission review of that hearing has not yet been completed.

rather than appeal it. This case raises issues of law that are presented with unusual clarity and sharpness on the record as it now stands. Supreme Court review is appropriate at this time; additional factual development, with the inevitably accompanying long delays, is neither necessary nor desirable.

The case is akin to dismissal of a complaint under Rule 12(b)(6), Fed. R. Civ. P., where the plaintiff's allegations are accepted as true and it is held that they do not state a viable claim as a matter of law. Here, PANE's contentions have been accepted as true, but the Commission and Judge Wilkey in dissent concluded as a matter of law that the contentions are not cognizable under NEPA. Judge Wright concluded, to the contrary, that NEPA does encompass psychological distress caused by public fear of "recurring catastrophe" at a nuclear power plant. The legal issue is thus presented in clear focus with lengthy opinions on both sides. The issue is ripe for decision by this Court now.

PANE complains in particular that Judge Wilkey failed to make a factual distinction between "mere anxieties" and fear of "recurring catastrophe" resulting in psychological distress. PANE brief at 57.[14] The pertinence of this observation is not immediately apparent. Judge Wilkey concluded, correctly we believe, that under NEPA an effect is either cognizable or it is not. The severity of the effect goes only to its "significance" under NEPA. 678 F.2d at 242. Judge Wilkey would have held that fear-induced psychological distress is not cognizable under

---

[14] Judge Wright did draw such a distinction, 678 F.2d at 230, but curiously PANE is not concerned by the factual assumptions that must underlie the distinction.

NEPA *regardless* of its severity. Thus his analysis can hardly be criticized for making unwarranted factual assumptions.

PANE also argues that Judge Wilkey should not have assumed that psychological distress cannot be measured, contrary to the "threshold finding" of the Licensing Board. PANE brief at 57.[15] Judge Wilkey did refer to the measurement problems identified by other courts that have rejected consideration of psychological factors under NEPA. 678 F.2d at 240-41. However, he also pointed out that the issue here is not measurement at all, but rather *prediction* of how individuals will react to restart, which he thought to be "particularly ephemeral and speculative." *Id.* at 240. Moreover, PANE's repeated references to the "threshold finding" by the Licensing Board are misleading because PANE fails to point out that the Board also stated:

> We cannot identify a source of evidence which would permit the measurement of the psychological stress phenomenon well enough for use in a full-scale cost/benefit balancing in an EIS. Nor do we know whether or not the state of the art can now produce such evidence.[16]

---

[15] The American Psychological Association suggests that measurability problems are the only basis for reversal urged by the private petitioners. APA brief at 4. That suggestion is wholly incorrect. There are several different grounds for reversal, perhaps the most important being that NEPA decision-making should turn on the actual environmental impact of a proposed action, not on public fears of the project.

[16] *Metropolitan Edison Company* (Three Mile Island Station, Unit No. 1), LBP-80-8, 11 N.R.C. 297, 305 (1980) (Joint Appendix in the court of appeals at 71).

In the final analysis, the issue before this Court is whether NEPA was intended to make federal licensing decisions turn on public fear of the facility to be licensed, regardless of the basis for the fears or the actual safety of the facility. This is an issue that can and should be resolved as a matter of law on the present record before this Court.

CONCLUSION

For all the reasons stated above and in their petition, the private petitioners submit that the decision of the court below should be summarily reversed. In the alternative, the case should be set for briefing and argument on the merits.

Respectfully submitted,

JAMES B. HAMLIN
Counsel of Record

GEORGE F. TROWBRIDGE
JOHN B. RHINELANDER
DEBORAH B. BAUSER
SHAW, PITTMAN, POTTS & TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Attorneys for Petitioners
Metropolitan Edison Company, et al.

Of Counsel:
JAMES B. LIBERMAN
DEBEVOISE & LIBERMAN
26 Broadway
New York, NY 10004
(212) 248-6900

October 7, 1982

MOTION FILED
SEP 30 1982

Nos. 81-2399, 82-358

IN THE

Supreme Court of the United States
OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

On Petition For a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

MOTION FOR LEAVE TO FILE BRIEF AMICUS CURIAE AND BRIEF AMICUS CURIAE OF THE AMERICAN MINING CONGRESS IN SUPPORT OF THE PETITIONS FOR A WRIT OF CERTIORARI

MARY JANE C. DUE, *COUNSEL OF RECORD*
EDWARD M. GREEN, *OF COUNSEL*
1920 N Street, N.W. Suite 300
Washington, D.C. 20036
(202) 861-2800
Attorneys for Amicus Curiae
American Mining Congress

September, 30 1982

Nos. 81-2399, 82-358

IN THE

Supreme Court of the United States
OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

On Petition For a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

MOTION FOR LEAVE TO FILE BRIEF AMICUS CURIAE AND BRIEF AMICUS CURIAE OF THE AMERICAN MINING CONGRESS IN SUPPORT OF THE PETITIONS FOR A WRIT OF CERTIORARI

The American Mining Congress, a non-profit corporation of the State of Colorado, acting in its capacity as a trade association composed of (1) producers of most of America's metals, coal and industrial and agricultural minerals; (2) manufacturers of mining and mineral processing machinery, equipment and supplies; and (3) engineering and consulting

firms and financial institutions that serve the mining industry, moves the Court for leave to file the accompanying brief as amicus curiae in support of petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the District of Columbia Circuit in this case.

The Petitioners, Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company and the United States Nuclear Regulatory Commission and the United States of America have consented through their respective counsel of record to the filing of this Motion and Brief. The Respondent has qualified consent to the issue of psychological health damage only.

The decision of the Court of Appeals for the District of Columbia Circuit if allowed to stand, will have far-reaching effects upon all mine operators.

First, in a comparison of risks outside the nuclear field the dissenting opinion of Circuit Judge Wilkey refers to the average loss of life in coal mining and the state of psychological health after a mine accident and raises the corollary of such incidences with the nuclear power incident before this Court.

Secondly, it is important to put to rest any possibility resulting from this case that there is a continuing obligation incumbent upon the Nuclear Regulatory Commission, or any other governmental entity to reassess the environmental impacts of a licensing decision in light of changed circumstances or information even in the absence of any proposal for further federal action.

In view of the widespread ramifications for the mining industry of the lower court's decision, the American Mining Congress respectfully moves the court to grant it permission to file the attached brief as an amicus curiae in support of the

Petitions filed by Metropolitan Edison Company, et al. (No. 81-2399), and the United States Nuclear Regulatory Commission and the United States of America (No. 82-358).

Respectfully Submitted,

Mary Jane C. Due, *Counsel of Record*
Edward M. Green, *Of Counsel*
Attorneys for the
American Mining Congress

QUESTION PRESENTED

(1) Whether the National Environmental Policy Act requires the Nuclear Regulatory Commission to consider stress (and accompanying physical symptoms), allegedly induced in persons residing in the vicinity of the Three Mile Island nuclear power facility by the pending proposal to authorize restart of Unit 1 of that facility (the unit not involved in the 1979 accident), in connection with its action upon that proposal, notwithstanding the absence of any causal nexus between the alleged stress and the effects of the proposed action upon the natural environment.

(2) Whether NEPA imposes upon the Nuclear Regulatory Commission a continuing obligation to reassess the environmental impacts of a licensing decision in light of changed circumstances or information even in the absence of any proposal for further federal action. (See footnote 12 of the Petition of the Department of Justice in No. 82-358.)

TABLE OF CONTENTS

	Page
QUESTION PRESENTED	i
TABLE OF CONTENTS	ii
TABLE OF AUTHORITIES	iii-iv
STATEMENT OF INTEREST	1
OPINIONS BELOW	2
JURISDICTION	2
STATUTES INVOLVED	2
STATEMENT OF CASE	2
REASONS FOR GRANTING THE PETITION	3
I. The Precedential Effect of the Lower Court's Decision Will Adversely Affect the Mining Industry.	3-7
II. If Allowed to Stand the Decision of the Lower Court Should be Limited to Its Facts	7
III. To Require Further Environmental Analysis as a Part of a Licensing Restart Proceeding Would Trivialize NEPA	7-9
CONCLUSION	9-10

TABLE OF AUTHORITIES

CASES:	Page
Environmental Defense Fund v. *Tennessee Valley Authority*, 468 F.2d 1164 (6th Cir. 1972)	f-1, 8
Natural Resources Defense Council, Inc., et al. v. *Morton, et al.*, 458 F.2d 827 (D.C. Cir. 1972)	8,9
U.S. v. *Scrap*, 412 U.S. 669 (1973)	10
Vermont Yankee Nuclear Power Corp. v. *NRDC*, 435 U.S. 519	8,9
STATUTES AND REGULATIONS:	
Atomic Energy Act of 1954, 42 U.S.C. 2011, *et seq*	9
Department of Energy Organization Act, 91 Stat. 42 U.S.C. 7101, *et seq*	9
Mining and Mineral Policy Act of 1970, 84 Stat, 1876, 30 U.S.C. 21a	4
National Environmental Policy Act of 1969, 42 U.S.C., 4321, *et seq*	passim
Section 2, 42 U.S.C. 4321	2,4
101, 42 U.S.C. 4331	2
102, 42, U.S.C. 4332	2
102 (2)(c) 42 U.S.C., 4332 (2)(c)	3,9
105, 42 U.S.C. 4335	4
National Materials and Minerals Policy, Research and Development Act of 1980, 94 Stat, 2305, 30 U.S.C. 1601	4
40 CFR 1502.9	8
Note: A list of Miscellaneous Statutes	5,6,7
MISCELLANEOUS:	
Conf. Rep. No. 91-765, 91st Cong. 1st Sess	4

"A Hard Look at Vermont Yankee, Environmental Law Under Close Scrutiny", 67 Geo. L.J. 699, 704-05 (1979) f-1,8

Nos. 81-2399, 82-358
Supreme Court of the United States
OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

On Petition For a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

BRIEF AMICUS CURIAE OF THE AMERICAN MINING CONGRESS

STATEMENT OF INTEREST

Pursuant to Rule 36.3, the American Mining Congress files this brief as amicus curiae in support of petitioners in No. 81-2399 and 82-358.

Its statement of interest is set forth in the accompanying motion.

OPINIONS BELOW

The opinion of the Court of Appeals is reported at 678 F. 2d 222. The orders of the Nuclear Regulatory Commission reviewed by the court of appeals and ancillary opinions are reported at 12 N.R.C. 607 and 14 N.R.C. 593 and reproduced in the Petition for a Writ of Certiorari filed by Metropolitan Edison Co., No. 81-2399, and referenced herein as "Pet. App."

JURISDICTION

The amended judgment of the court of appeals (Pet. App. 103a-104a) was entered (without supporting opinions) on April 2, 1982. A modified version of the amended judgment (Pet. App. 29a-30a) was entered on May 14, 1982, at the time opinions were entered. On June 23, 1982, the Chief Justice extended the time for filing a petition for a writ of certiorari to and including August 20, 1982. On August 12, 1982, the Chief Justice further extended the time for filing such a petition to and including August 30, 1982. The jurisdiction of this court is invoked under 28 U.S.C. 1254 (1).

STATUTES INVOLVED

Sections 2, 101 and 102 of the National Environmental Policy Act of 1969, 42 U.S.C. 4321, 4331, and 4332, 4335, (NEPA) are reported at Pet. App. 109a-113a.

STATEMENT OF THE CASE

The American Mining Congress, Amicus Curiae, rather than duplicating printed matter before the court adopts by way of reference the Statement of the Case set forth in the Petition for a Writ of Certiorari filed by the Solicitor General on behalf of the United States Nuclear Regulatory Commission and the United States, pp 2-16.

REASONS FOR GRANTING THE PETITION

A writ of certiorari should be granted in this case because the court of appeals' decision is an intrusion into procedural decision making within an agency which exceeds the bounds of reason and the purposes and national policy set forth in the National Environmental Policy Act of 1969, 42 U.S.C. 4321, et seq.

If allowed to stand, this decision would affect the decision making of every other federal agency involved in regulatory and licensing activities and would require a psychological stress factor to be considered in environmental impact statements ranging from a proposed grazing management program on livestock, big game and wild horses on Bureau of Land Management lands, to a programmatic environmental impact statement for the development of a synthetic fuels industry in a three-state area.

I. The Precedential Effect of the Lower Court's Decision Will Adversely Affect the Mining Industry.

The decision now before this Court has caused great concern among members of the mining industry. The applicability of this decision to situations involving risk in other mining, manufacturing and industrial activities throughout the United States would operate as a significant hinderance on productivity and therefore would adversely affect the domestic well being and national security of the United States.

The dissent raises the question "On the majority's reasoning here..." (footnote 37, Pet. App. 45a), will the Department of Labor's Safety and Health Administration be required to go through NEPA procedures after every mine disaster?

Every mine disaster is traumatic and painful to labor, industry and the general public. Every effort is made to avoid such occurrences. The fact that such events occur, however, does not lead to any requirement for a consideration of

psychological stress in connection with each and every licensing or regulatory proceeding.

The alternatives i.e., the risks involved in whether to mine or not have already been determined. The Mining and Minerals Policy Act of 1970, 84 Stat. 1976, 30 U.S.C. 21a; and National Materials and Minerals Policy, Research and Development Acct of 1980, 94 Stat. 2305, 30 U.S.C. 1601, make abundantly clear that mineral development is a national policy of high priority. There is a need for the materials sought, and Section 2 (42 U.S.C. 4321) of NEPA declares the national policy is to "encourage *productive* and enjoyable harmony between man and his environment;..." (emphasis supplied).

Furthermore, Section 4335 of NEPA specifically provides that the policies and goals of NEPA are *supplementary* to those set forth in existing authorizations of Federal agencies. The Conference Committee of the Congress, in explaining section 4335 said: "The effect of this section,...is to give recognition to the fact that the bill does not repeal existing law." Conf. Rep. No. 91-765, 91st Cong., 1st Sess.

In an apparent attempt to distinguish the nuclear industry from every other risk-prone industry, the lower court said that not all psychological effects rise to the level of psychological health effects. NEPA applies to mental health effects of federal actions, the court said, if sufficiently severe (Pet. App. 16a-17a). The mischief of such a conclusion is readily apparent.

Judge Wilkey stated in his dissent that the extension of NEPA to encompass psychological stress is unwarranted, unprecedented, inconsistent and well designed to delay the development of nuclear power. Carried to its logical conclusion, if the majority decision is allowed to stand, the extension of NEPA would delay the development of mines and mining activities, including the mining of energy-producing minerals (other than those used in nuclear energy) throughout the United States. Such a conclusion is unacceptable as national policy.

The federal permitting requirements and enforcement schemes regulating mining operations that could be affected by the decision of the lower court include the following:

I. Permitting requirements and enforcement schemes pertaining to control of pollutants and harmful emissions under:

A. Clean Air Act, Pub. L. No. 88-206, 77 Stat. 392 (1963) (codified as amended at 42 U.S.C. § 7401 *et seq.* (1977)).

B. Clean Water Act of 1977, Pub. L. No. 95-217, 91 Stat. 1566, 33 U.S.C. § 1251 *et seq.*

C. Federal Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 816 (1956) (codified as amended at 33 U.S.C. § 1251 *et seq.* (1977)).

D. Solid Waste Disposal Act, Pub. L. No. 89-272, 79 Stat. 997 (1965) (codified as amended at 42 U.S.C. § 6901 *et seq.* (1980)).

Resource Conservation and Recovery Act of 1976, Pub. L. No. 94-580, 90 Stat. 2795, 42 U.S.C. § 6901 *et seq.*

E. Comprehensive Environmental Response, Compensation and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767, 42 U.S.C. § 9601 *et seq.*

F. Toxic Substances Control Act, Pub. L. No. 94-469, 90 Stat. 2003, 15 U.S.C. § 2601 *et seq.* (1976).

G. Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 (codified as amended at 42 U.S.C. § 2011 *et seq.* (1976)).

H. Uranium Mill Tailings Radiation Control Act of 1978, Pub. L. No. 95-604, 92 Stat. 3021, 42 U.S.C. § 2014 *et seq.*

II. Permitting requirements and enforcement schemes pertaining to mining on public lands under:

A. Mining Law of 1872, *as amended*, ch. 152, § 1, 17 Stat. 91, 30 U.S.C. 21 *et seq.* (1981).

B. Mineral Lands Leasing Act, ch. 85, 41 Stat. 437 (1920) (codified as amended at 30 U.S.C. § S 181 *et seq.* (1981)).

C. Federal Land Policy and Management Act of 1976, Pub. L. No. 94-579, 90 Stat. 2744, 43 U.S.C. § 1701 *et seq.*

D. Combined Hydrocarbon Leasing Act of 1981, Pub. L. No. 97-78, 95 Stat. 1070, 30 U.S.C. § 181 *et seq.*

E. Geothermal Steam Act of 1970, Pub. L. No. 91-581, 84 Stat. 1566, 30 U.S.C. §§ 1001-1025.

Geothermal Energy Act of 1980, Pub. L. No. 96-294, 94 Stat. 763, 30 U.S.C. § 1141 *et seq.*

F. Geothermal Energy Research, Development, and Demonstration Act of 1974, Pub. L. No. 93-410, 88 Stat. 1079, 30 U.S.C. § 1101 *et seq.*

These statutes govern activities such as:

(1) Mining plans

(2) Land exchanges

(3) Land use planning

(4) Mineral, coal, oil, shale, and tar sand leases and

(5) Rights-of-way on, over, and across federal land.

III. Permitting requirements and enforcement schemes under the Surface Mining Control and Reclamation Act of 1977, 91 Stat. 447 *30 U.S.C.*, § 1201 *et seq.*.

IV. Plan requirements and enforcement schemes under the

Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 801 *et seq.*.

V. Rulemaking activities under any statute mentioned in I-IV.

II. If Allowed to Stand the Decision of the Lower Court Should be Limited to Its Facts.

The lower court has gone to great pains to narrow the effect of its decision.

At Pet. App. 13a-14a the court said: "Americans have never before experienced the psychological aftermath of a major accident at a nuclear power plant, one that aroused fears of a nuclear core meltdown and led to mass evacuation..."

At Pet. App. 16a the court said: "We conclude that PANE's allegation—in the wake of a unique and traumatic nuclear accident—"

At Pet. App. 17a the court said: "Three Mile Island is, at least so far, the only event of its kind in the American experience."

For reasons herein set forth, this *Amicus* believes that the decision of the lower court is clearly in error, but if the event, i.e., the 1979 accident (which is not connected to the restart of Unit 1), was a "never before", "unique", "traumatic nuclear accident", and "the only event of its kind in the American experience", then surely the decision of the lower court must be limited to its facts. To do otherwise would create chaos in the permitting and regulating activities of the Federal government at every level.

III. To Require Further Environmental Analysis as a Part of a Licensing Restart Proceeding Would Trivialize NEPA.

The purpose of Congress in enacting NEPA was that federal officials appraise continuously all of their activities not

only in terms of economic or technological considerations, but also with reference to broad environmental concerns. This purpose does not require a never-ending, non-final environmental impact statement or a supplemental EIS for each and every oversight thereafter, once an agency has taken a "hard look" at the environmental consequences initially.[1]

Time, resources and reason must come together in the procedural steps leading to decision making. This Court said in *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, 435 U.S. 519, 551: "Common sense also teaches us that the detailed statement of alternatives cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man." And cited with approval the Court of Appeals for the District of Columbia in *Natural Resources Defense Council, Inc., et al., v. Morton, et al.*, 458 F. 2d 827, 837-838 (D.C. Cir. 1972): "There is reason for concluding that NEPA was not meant to require detailed discussion of the environmental effects of 'alternatives' put forward in comments when these effects cannot be readily ascertained and the alternatives are deemed only remote and speculative possibilities,..."

The regulations of the Council on Environmental Quality, 40 CFR 1502.9 (1981), require a supplement to an environmental impact statement if:

(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or

(ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

---

1. *Cf. Environmental Defense Fund* v. *Tennessee Valley Authority*, 468 F. 2d 1164, 1174 (6th Cir. 1972), and see *A Hard Look at Vermont Yankee, Environmental Law Under Close Scrutiny*, 67 Geo. L. J. 699, 704-705 (1979).

The attempt by the lower court to require a supplemental EIS for each and every exercise of supervisory responsibility over operations and maintenance of a licensed operation would make every ongoing agency action a major federal action and would be as unending and unnecessary as including every conceivable alternative device in an EIS,...a concept already rejected by this Court in *Natural Resources Defense Council, Inc., supra.*

The final environmental impact statement and the extensive safety review already completed in the case at bar met the requirements of 102(2)(C) of NEPA. To require a supplemental environmental impact statement at every stage of NRC's supervisory responsibility not only trivializes NEPA, but makes a mockery of Federal decision making.

CONCLUSION

The lower court has used a unique approach to the NEPA process in an attempt to deter nuclear power. It is unfortunate indeed that the specter of a nuclear debate over the very existence of the nuclear energy industry itself comes before the Court disguised in this manner.

As this Court has so aptly said in *Vermont Yankee:*

> The fundamental policy questions appropriately resolved in Congress and in the state legislatures are *not* subject to reexamination in the federal courts under the guise of judicial review of agency action. *Time may prove wrong the decision to develop nuclear energy, but it is Congress or the States within their appropriate agencies which must eventually make that judgment.*
> (435 U.S. 519, 558 (emphasis supplied))

The question of nuclear development was decided legislatively by passage of the Atomic Energy Act, 68 Stat. 919, 42 U.S.C. § 2011 *et seq.* and its successor, the Department of

Energy Organization Act, 91 Stat. 565, 42 U.S.C. 7101, *et seq.* And the question of licensing the plant, including consideration of the environmental factors mandated by NEPA, has already been weighed and decided by the Commission. NEPA should not be used to thwart this national policy. As this Court has said in *U.S.* v. *Scrap,* 412 U.S. 669, 694 (1973): "...NEPA was not intended to repeal by implication any other statute." The same can be said for the requirements imposed upon the Nuclear Regulatory Commission by the majority opinion of the lower court.

The valiant attempt by the lower court to distinguish this decision requiring psychological impact statements under NEPA from all other agency licensing and regulatory requirements (which are major federal actions and therefore cognizable under NEPA) fails. The ripple effect caused by the lower court holding in the case at bar would bring to a standstill all regulatory and licensing requirements and would make NEPA the supreme law and not the supplemental law which it clearly was intended to be.

Amicus urges the Court to grant the Petitions herein and to set the case for briefing and argument on the merits.

Respectfully submitted,

Mary Jane C. Due, *Counsel of Record*
Edward M. Green, *Of Counsel*
Attorneys for American Mining Congress
1920 N Street, N.W., Suite 300
Washington, D.C. 20036
(202) 861-2860

SEP 27 1982

Nos. 81-2399 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY and PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

MOTION FOR LEAVE TO FILE BRIEF AMICUS CURIAE AND BRIEF OF ATOMIC INDUSTRIAL FORUM AS AMICUS CURIAE IN SUPPORT OF PETITIONS FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

MICHAEL I. MILLER
Counsel of Record

LINDA L. HODGE
Staff Counsel
Atomic Industrial Forum, Inc.
7101 Wisconsin Avenue
Washington, D.C. 20014

PHILIP P. STEPTOE
Isham, Lincoln & Beale
Suite 5200
Three First National Plaza
Chicago, Illinois 60602
(312) 558-7500
Attorneys For Amicus Curiae

Pandick Press Midwest, Inc., Chicago • 454-7600

QUESTION PRESENTED

Whether the National Environmental Policy Act requires a continuing reassessment of the environmental effects of operation of a nuclear power plant licensed by the Nuclear Regulatory Commission regardless of any proposal for further federal action by way of license amendment or otherwise.

Nos. 81-2399 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY and PENNSYLVANIA ELECTRIC COMPANY,

Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,

Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,

Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,

Respondents.

MOTION FOR LEAVE TO FILE BRIEF AMICUS CURIAE

The Atomic Industrial Forum ("the Forum") respectfully requests leave to file *instanter* the attached brief *amicus curiae*. The interest of the Forum is as stated in the brief.

The Forum supports the position of Petitioners United States Nuclear Regulatory Commission and United States of America in No. 82-358 (hereinafter, "the Government"), and Petitioners Metropolitan Edison Company, Jersey Central Pow-

er & Light Company and Pennsylvania Electric Company in No. 81-2399 (hereinafter, "Private Petitioners"), that psychological distress (and accompanying physical symptoms) allegedly induced in persons living near nuclear power plants is not an environmental impact cognizable under the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.*, (1976) ("NEPA"). This brief is not a repetition of arguments already put forth by Petitioners. Instead, the Forum wishes to bring the attention of this Court to another important question raised by the decision below which has not been tendered for review in the petitions for certiorari.

The court of appeals stated that, because of the Nuclear Regulatory Commission's continuing activities in regulating all nuclear power plants, the day-to-day operation of such plants constitutes proposed federal action subject to continual reassessment under NEPA. The court of appeals did not limit its discussion to Three Mile Island Unit 1 ("TMI-1"). This aspect of the court of appeals' decision adversely affects every nuclear power plant licensee in the country. If not corrected by this Court, it may well result in the NRC and nuclear power plant licensees diverting resources from performing safety and environmental reviews of new nuclear plants to conducting redundant environmental reviews of currently operating plants. At worst, the ruling implies that forty-year licenses issued only after incredibly exhaustive safety and environmental reviews may be revoked whenever the NRC, or a reviewing court, concludes that the NEPA cost/benefit balance no longer favors continued operation, or that preferable alternatives exist.

This issue is as important to the remainder of the electric utilities which build and operate nuclear power plants as the "psychological distress" issue raised by Petitioners.

Private Petitioners are, of course, members of the regulated nuclear industry and therefore might have been expected to tender for review the question of whether NEPA requires the continuous environmental reassessment of licensed nuclear power plants. However, in view of their urgent need to restart

the undamaged reactor at TMI-1 as promptly as possible, it is perhaps not surprising that Private Petitioners chose to concentrate their efforts on the immediate roadblock to such restart, which is the court of appeals' requirement with respect to the consideration of psychological distress. The Government indicates in its petition for certiorari that it would raise this issue "if free to do so," since the majority opinion below is irreconcilable with previous Supreme Court decisions interpreting NEPA. However, the Government, without waiving the question, does not tender it for review because in the Government's opinion "the result in this case probably does not turn upon its resolution." (Gov. Pet. at 17-18 n.12).[1] Adopting Judge Wilkey's view (Met. Ed. App. A at 50a), the Government suggests that the application of NEPA in this case could rest upon the narrow ground that the TMI-1 restart proceeding involves a proposal for major federal action, rather than the sweeping proposition that all licensed nuclear reactors are subject to continuing reassessment under NEPA.

The Forum agrees with the Government and Judge Wilkey that the application of NEPA in this case could rest on far narrower grounds than those articulated by the majority opinion. Certainly there is no doubt that this Court ought to reach the psychological distress issue raised by Private Petitioners and by the Government. Nevertheless, the overbroad, sweeping statements by the court of appeals concerning the need for continuing environmental reassessment of all nuclear power plants are so important that they ought not to be ignored. The Forum believes that its brief will assist the Court in considering an aspect of the court of appeals' decision which might otherwise escape review. For this reason leave to file the attached brief should be granted.

---

[1] References to the petition for a writ of certiorari filed on behalf of the United States Nuclear Regulatory Commission and the United States are cited as "Gov. Pet. at ____". Citations to the decision below are to Appendix A to the petition for certiorari filed by Private Petitioners, which is cited as "Met. Ed. App. A."

The Forum was unable to secure the consent of the Respondent People Against Nuclear Energy to the filing of this brief. Counsel for Metropolitan Edison Company and the Solicitor General have granted their consent. The positions of the parties with respect to the Forum's submission of this brief are indicated in their letters filed with the Court.

Respectfully submitted,

MICHAEL I. MILLER
Counsel of Record

LINDA L. HODGE
Staff Counsel
Atomic Industrial Forum, Inc.
7101 Wisconsin Avenue
Washington, D.C. 20014

PHILIP P. STEPTOE
Isham, Lincoln & Beale
Suite 5200
Three First National Plaza
Chicago, Illinois 60602
(312) 558-7500
Attorneys For Amicus Curiae

INDEX

	PAGE
Table of Authorities	ii
Interest of the Atomic Industrial Forum	1
Summary of Argument	3
Reasons Why The Writ Should Be Granted	4
A. The Court of Appeals' Ruling That NEPA Requires Continual Environmental Reassessment of Nuclear Power Plants Even After They Are Licensed Is Erroneous and Will Impose Significant Burdens on the NRC and the Industry It Regulates	5
B. The Court of Appeals' Ruling That the Issuance of an Operating License for a Nuclear Power Plant Is Subject to Continual Reconsideration Under NEPA Is Contrary to the Concept of Finality of Agency Action and to the Intent of Congress Expressed in the Atomic Energy Act	11
Conclusion	15

TABLE OF AUTHORITIES

PAGE

Cases

Aberdeen & R. R. Co. v. *SCRAP*, 422 U.S. 289 (1975) 12

Andrus v. *Sierra Club*, 442 U.S. 347 (1979) 13

Calvert Cliffs' Coordinating Committee, Inc. v. *U.S.A.E.C.*, 449 F.2d 1109 (D.C. Cir. 1971) 6

Commonwealth Edison Company (Dresden Nuclear Power Station, Unit No. 1), DD-80-24, 11 N.R.C. 951 (1980) 8

ICC v. *Jersey City*, 322 U.S. 503, 514 (1944) 9

Kleppe v. *Sierra Club*, 427 U.S. 390 (1976) 12

Natural Resources Defense Council, Inc. v. *NRC (Vermont Yankee III)*, Nos. 74-1586, 77-1448, 79-2110, and 79-2131 (D.C. Cir. April 27, 1982) 10, 13-14

Natural Resources Defense Council, Inc. v. *NRC (Vermont Yankee III)*, Nos. 74-1586, 77-1448, 79-2110, and 79-2131 (D.C. Cir. June 30, 1982) (Statement of Senior Circuit Judge Bazelon as to why he voted to deny rehearing) 10

Portland General Electric Company (Trojan Nuclear Plant), ALAB-531, 9 N.R.C. 263 (1979) 13

Power Reactor Development Corp. v. *International Union of Electrical, Radio and Machine Workers*, 367 U.S. 396 (1961) 7

Sholly v. *U.S. N.R.C.*, 651 F.2d 780 (D.C. Cir. 1980), *cert. granted*, 451 U.S. 1016 (May 26, 1981) 8

Sierra Club v. *Andrus*, 581 F.2d 895 (D.C. Cir. 1978), *rev'd on other grounds*, 442 U.S. 347 (1979) 13

PAGE

Vermont Yankee Nuclear Power Corp. v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978) 4, 9, 10, 15

Virginia Electric Power Company (Surry Nuclear Power Station, Units 1 and 2), CLI-80-4, 11 N.R.C. 405 (1980) 8

Weinberger v. *Catholic Action of Hawaii*, ____ U.S. ____, 102 S.Ct. 197 (1981) 12

Statutes

Atomic Energy Act of 1954, ch. 703, 68 Stat. 919 (1954) (codified at 42 U.S.C. § 2011 *et seq.* (1976)) 3, 12

National Environmental Policy Act of 1969, 42 U.S.C. § 4321 *et seq.* ..... *passim*

42 U.S.C. § 2133(b) (1976) 11

42 U.S.C. § 2236 (1976) 11

42 U.S.C. § 2237 (1976) 11

42 U.S.C. § 2239(a) (1976) 7, 8

Regulations

10 C.F.R. Part 2, Appendix A (1982) 7

10 C.F.R. § 50.59 (1982) 8

10 C.F.R. § 51.5 (1982) 8

10 C.F.R. § 51.5(d) (1982) 5

10 C.F.R. § 51.7 (1982) 8, 11

10 C.F.R. § 51.20 (1982) 6

10 C.F.R. § 51.21 (1982) 7, 10

10 C.F.R. § 51.22 (1982) 7

10 C.F.R. § 51.23 (1982) 7

10 C.F.R. § 51.24 (1982) 7

PAGE

10 C.F.R. § 51.25 (1982) 7

10 C.F.R. § 51.26 (1982) 7

40 C.F.R. § 1502.9(c)(ii) (1981) 9

40 C.F.R. § 1508.9 (1981) 11

40 C.F.R. § 1508.18(a) (1981) 5

47 Fed. Reg. 12,940 *et seq.* (March 26, 1982) (amending 10 C.F.R. §§ 51.21, 51.23(e), 51.53) 10

Legislative History

Joint Comm. on Atomic Energy, 83d Cong., 2d Sess., *A Proposed Act to Amend the Atomic Energy Act of 1946,* 21 (Comm. Print April 1954), *reprinted in* 1 U.S.A.E.C., *Legislative History of the Atomic Energy Act of 1954,* at 81 (1955) 12

S. 3323 and H.R. 8862 to Amend the Atomic Energy Act of 1946: Hearings Before the Joint Committee on Atomic Energy, 83d Cong., 2d Sess., 230-31 (1954) (Statement of E. H. Dixon), *reprinted in* 2 U.S.A.E.C. *Legislative History of the Atomic Energy Act of 1954,* at 1864-65 (1955) 12

Joint Comm. on Atomic Energy, 83d Cong., 2d Sess., *Draft in Bill Form* 41 (Comm. Print May 21, 1954), *reprinted in* 1 U.S.A.E.C., *Legislative History of the Atomic Energy Act of 1954,* at 297 (1955) 12

PAGE

Miscellaneous

Letter from John F. Ahearne, acting Chairman, NRC, to the Honorable Tom Bevill, Chairman, Subcommittee on Appropriations, House Committee on Appropriations (August 27, 1982) (enclosing monthly status reports as required by House Report 96-1093) 2

USNRC, Regulatory Guide 4.2, Preparation of Environmental Reports for Nuclear Power Stations (Rev. 2 1976) 6

USNRC, NUREG 0555, Environmental Standard Review Plans For the Environmental Review of Construction Permit Applications For Nuclear Power Plants (May 1979) 7

USNRC, Statement of Policy, 47 Fed. Reg. 31,762 (July 22, 1982) 4

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY and PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

BRIEF OF THE ATOMIC INDUSTRIAL FORUM AS AMICUS CURIAE IN SUPPORT OF PETITIONS FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

INTEREST OF THE ATOMIC INDUSTRIAL FORUM

The Forum is an association of about six hundred domestic and overseas organizations involved in the peaceful uses of nuclear energy. The membership includes electric utilities, manufacturers, architect/engineer/construction firms, service organizations, consultants, uranium producers, radionuclide and radiopharmaceutical suppliers, financial institutions, universities, labor unions, government agencies and research labo-

ratories. One hundred and five of the Forum's 122 domestic electric operating utility members rely on, or plan in the future to rely on, nuclear power generation for at least a portion of their power needs.

The court of appeals' decision prejudices the interests of the Forum's members by its statements that the operation of nuclear power plants by those of the Forum's members who have previously been granted NRC operating licenses constitutes proposed federal action subject to continuing reassessment under NEPA. (Met. Ed. App. A at 18a-23a.) This ruling robs the NRC licensing process, upon which the Forum's members have relied in investing billions of dollars, of any finality. It implies that operating licenses issued for terms of up to forty years only after the exhaustive administrative review may be terminated at any time upon a finding by the NRC that the NEPA cost/benefit balance no longer favors continued operation or that there are environmentally preferable alternatives. Moreover, it is likely to divert NRC and industry resources from reviewing the safety and environmental impacts of new nuclear power plants to reassessing the environmental impacts of currently operating plants. This will prejudice the interests of many Forum members with nuclear power plants under construction, who thereby have a vital interest in the timely completion of the NRC licensing process.[1]

Finally, the interests of the Forum in this case are congruent with the national interest. Both Congress and the Executive Branch have determined that generation of electricity

[1] Current NRC estimates are that 10 reactors presently under construction will be ready to receive operating licenses in 1982, and 16 more will receive operating licenses in 1983. See letter from John F. Ahearne, Acting Chairman, NRC, to the Honorable Tom Bevill, Chairman, Subcommittee on Appropriations, House Committee on Appropriations (August 27, 1982) (enclosing monthly status reports as required by House Report 96-1093).

through nuclear power is important to national well-being and security, in that it helps reduce reliance on dwindling domestic resources and undependable foreign sources of oil and gas. The court of appeals' decision tends to frustrate that national policy by erecting needless roadblocks to the continued private development of nuclear power.

SUMMARY OF ARGUMENT

Before the decision of the court of appeals, the NRC's licensing decisions in issuing construction permits and operating licenses for nuclear power plants were the instances of proposed federal action which caused that agency to prepare environmental impact statements in conformity with the requirements of NEPA. That certainty in the licensing process has been seriously undermined by the decision of the court of appeals. The majority opinion asserts that the routine day to day operation of licensed nuclear power plants within the terms of licenses previously issued by the NRC imposes on that agency a continuing obligation to reassess the plants under NEPA even in the absence of any proposal for further federal licensing action. The scope of this language was expressly *not* limited to TMI-1. This decision, if uncorrected, is likely to inflict on utilities, the NRC, and federal courts the needless burden of preparing and reviewing endless, redundant environmental documents justifying licensing decisions which have already been made. NRC and industry resources are much better employed studying and improving the safety of operating plants, and reviewing the safety and environmental impacts of new plants.

Moreover, the court of appeals' decision is directly in conflict with the intent of Congress in adopting the Atomic Energy Act of 1954, 42 U.S.C. § 2011 *et seq.* (1976). That Act encourages the peaceful development of nuclear power by, among other things, providing for the issuance of commercial

operating licenses for periods of up to 40 years. The court of appeals' decision, by making operating licenses issued to private parties subject to continuous federal environmental cost/benefit balancing, destroys the finality of the NRC licensing process. Thus, the court of appeals has undercut the incentive created by Congress to encourage the commercial development of nuclear power, contrary to the instructions of this Court in *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 557-58 (1978).

REASONS WHY THE WRIT SHOULD BE GRANTED

The Forum strongly supports the arguments of Private Petitioners and the Government that the holding of the court of appeals that NEPA requires consideration of psychological distress in the Three Mile Island Unit 1 restart proceeding cannot logically be confined to that case.[2] An important and erroneous precedent has been set that under circumstances which the courts of appeals are apparently free to define, NEPA requires federal agencies to base their decisions on public anxiety itself, rather than on a careful (in this case, exhaustive) review of the underlying causes of such anxiety. This is likely to have a profound, distorting influence on federal decision-making with respect to nuclear power plants and other projects which may cause psychological stress in members of the public, such as the construction of jails, dams, and defense installations, and the sponsoring of controversial biomedical research.

---

[2] This is true even though the NRC has recently taken steps to limit the consideration of "psychological distress" contentions in licensing proceedings other than TMI-1. See USNRC, Statement of Policy, 47 Fed. Reg. 31,762 (July 22, 1982). Absent effective reversal of the court of appeals' decision, such contentions will continue to be raised and continue to provide grounds for appeal from NRC licensing decisions.

The purpose of this *amicus curiae* brief, however, is to draw the attention of the Court to another important aspect of the court of appeals' decision not raised in the petitions for certiorari which, if left uncorrected, will have a significant adverse impact on the nuclear industry. This error provides an additional reason for granting the requested writ of certiorari.

A. The Court of Appeals' Ruling That NEPA Requires Continual Environmental Reassessment of Nuclear Power Plants Even After They Are Licensed Is Erroneous and Will Impose Significant Burdens on the NRC and the Industry It Regulates.

In the court below, the NRC argued that its decision whether to allow resumption of operations at TMI-1 was an enforcement action, rather than a licensing decision, and therefore was not a "major federal action" requiring compliance with NEPA. *See* 10 C.F.R. § 51.5(d) (1982); 40 C.F.R. § 1508.18(a) (1981). This argument was rejected by the court of appeals on the broadest conceivable ground. The court of appeals stated that the Commission's regulatory responsibilities with regard not only to TMI-1 but also to all other nuclear reactors are analogous to a more or less continuing agency decision to sustain an ongoing program that the agency has discretion to terminate at any time. (Met. Ed. App. A at 22a-23a.) According to the court of appeals, "[T]he extent of the Commission's statutory responsibilities over licensed nuclear facilities creates a continuing obligation to comply with NEPA." (Met. Ed. App. A at 19a). The effect of this statement will be to divert NRC and industry resources from assuring the safety of existing nuclear plants and conducting safety and environmental reviews of new nuclear plants to the needless preparation of redundant environmental documents for plants

which have already been licensed after thorough environmental scrutiny.[3]

Following the decision in *Calvert Cliffs' Coordinating Committee, Inc.* v. *U.S.A.E.C.*, 449 F.2d 1109 (D.C. Cir. 1971), the Atomic Energy Commission (the predecessor of the NRC) adopted the present rigorous and exhaustive approach to discharging that agency's obligations under NEPA. In order to obtain a construction permit for a proposed nuclear power plant, applicants must file an environmental report which surveys and evaluates a wide variety of environmental costs and benefits over the plant's 40-year life, together with a discussion of possible alternatives to the plant. *See* 10 C.F.R. § 51.20 (1982).[4] Based on this information and its own independent

[3] In a footnote, the Government in its petition for certiorari indicates that the majority opinion below with respect to continuing NEPA reassessment of nuclear power plants is erroneous and that, "if free to do so", it would tender the question for review. The Government states that it does not tender the question "only because the result in this case probably does not turn upon its resolution." The Government goes on to suggest that the question "may be dictum" and is not presented "in sharp focus." (Gov. Pet. at 17-18 n.12). Whether or not the result in the court of appeals turned on this issue, the language of the majority opinion clearly has unlimited potential to upset the NRC licensing process. Neither the majority nor the dissenting opinion saw fit to characterize the treatment of this issue as "dictum". This issue is too important to the continued development of the commercial nuclear power industry to be left uncorrected and in the legal limbo to which the Government has consigned it in its petition for writ of certiorari.

[4] According to USNRC, Regulatory Guide 4.2, Preparation of Environmental Reports for Nuclear Power Stations (Rev. 2 1976), an applicant's environmental report must address the purpose of the proposed facility and associated transmission facilities, the site and environmental interfaces (including geography, demography, ecology, meteorology, hydrology, geology, regional historic archaelogical, architectural, scenic, cultural and natural features, and noise), the

(Footnote continued on following page)

evaluations, the NRC Staff prepares a draft environmental statement which is distributed to other federal, state and local agencies and to the public for comment, following which a final environmental impact statement is prepared and distributed. 10 C.RF.R. § 51.24, 51.25, 51.26 (1982). A mandatory public adjudicatory hearing is then held, in which the draft and final environmental impact statements and any comments thereon are considered along with the application and the NRC Staff's safety evaluation. 42 U.S.C. § 2239(a) (1976). Interested persons have a right to intervene and participate in such hearings, by litigating any aspect of the safety or environmental impact of the proposed facility. *See generally* 10 C.F.R. Part 2, Appendix A (1982). If a construction permit is awarded, the utility then proceeds to build the plant at its own risk. *Power Reactor Development Corp.* v. *International Union of Electrical, Radio and Machine Workers,* 367 U.S. 396 (1961). These days, this reflects an investment of several billion dollars.

Before the utility can receive an operating license for the plant, it must again go through a safety and environmental review process similar to that described above. Another environmental report is required, draft and final environmental impact statements must again be prepared and circulated by the NRC Staff, and public adjudicatory hearings will again be held, if requested by any person whose interest may be affected by operation of the plant. *See* 42 U.S.C. § 2239(a) (1976); 10 C.F.R. §§ 51.21, 51.22-51.26 (1982). Even after issuance of a

---

(Footnote continued from preceding page)

effects of station construction and operation (including radiological and non-radiological effluents), effluent monitoring, environmental effects of accidents, socioeconomic impacts, alternative energy sources and sites, station design alternatives, and a cost/benefit analysis. This guidance is substantially amplified by USNRC, NUREG 0555, Environmental Standard Review Plans for the Environmental Review of Construction Permit Applications for Nuclear Power Plants (May 1979). The environmental reports so produced are exhaustive multi-volume treatises.

40-year operating license, if an applicant proposes any changes to the facility which require license amendments,[5] the NRC will prepare at least an environmental assessment and may prepare an environmental impact statement, if the license amendment is likely to have a significant impact on the human environment or if, as a matter of discretion, it so chooses. *See* 10 C.F.R. §§ 51.5, 51.7 (1982); *Virginia Electric Power Company* (Surry Nuclear Power Station, Units 1 and 2), CLI-80-4, 11 N.R.C. 405 (1980) (preparation of an environmental impact statement on licensee's proposal to repair steam generators); *Commonwealth Edison Company* (Dresden Nuclear Power Station, Unit No. 1), DD-80-24, 11 N.R.C. 951 (1980) (discretionary preparation of environmental impact statement for proposed chemical cleaning). And there is again a right upon request by any interested person to a public adjudicatory hearing in which the safety and environmental impacts of the proposed action may be litigated.[6]

The most likely result of the court of appeals' decision will be to require the endless preparation of supplemental environmental impact statements. As Judge Wilkey, in dissent, points out, under the Council on Environmental Quality's regulations,

> Preparation of an EIS or a supplemental EIS is required only for proposed *actions.* Yet under the majority's interpretation, the NRC is engaged in such "action" every

---

[5] Licensees can make some changes at nuclear power plants without prior NRC safety and environmental review, but only if such changes do not involve "unreviewed safety questions." *See* 10 C.F.R. § 50.59 (1982).

[6] If the proposed license amendment involves a significant hazard consideration, a hearing, if requested, must be held prior to issuance of the amendment. 42 U.S.C. § 2239(a) (1976). The Court of Appeals for the District of Columbia Circuit has held that a prior hearing must be held, if requested, even in cases which the NRC has determined do not involve "significant hazards considerations." *Sholly v. U.S. N.R.C.*, 651 F.2d 780 (D.C. Cir. 1980), *cert. granted*, 451 U.S. 1016 (May 26, 1981).

> second of every day. It thus will be possible for NEPA to apply even when a nuclear plant is operating pursuant to an NRC license and the NRC proposes to take no action to upset this status quo.

(Met. Ed. App. A at 49a) (emphasis in original). Specifically, the NRC and licensees will now be burdened with the need to prepare supplemental environmental impact statements whenever it is determined that there are significant new circumstances or information relevant to environmental concerns and bearing on the operation of an already licensed facility. 40 C.F.R. § 1502.9(c)(ii) (1981). In a footnote, the court of appeals opines that if no "substantial changes" occur and no "significant new circumstances or information relevant to environmental concerns" arise, the court of appeals' ruling will not significantly increase the NEPA burden on regulatory agencies in the future. (Met. Ed. App. A at 23a n.16). But new circumstances and information *always* arise following issuance of any operating license which could make the final environmental statement prepared at the operating license stage subject to supplementation.[7] For example, the relative costs and benefits of nuclear generation as typically set out in an NRC-prepared final environmental statement are dependent on comparisons of fuel costs and projections of electricity demand

---

[7] Indeed, as this Court has pointed out in a similar context:

> "Administrative consideration of evidence . . . always creates a gap between the time the record is closed and the time the administrative decision is promulgated [and, we might add, the time the decision is judicially reviewed] . . . . If upon the coming down of the order litigants might demand rehearings as a matter of law because some new circumstance has arisen, some new trend has been observed, or some new fact discovered, there would be little hope that the administrative process could ever be consummated in an order that would not be subject to reopening." *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 554-55 (1978) (quoting *ICC* v. *Jersey City*, 322 U.S. 503, 514 (1944)).

which continually change. The alternatives against which continued operation must be evaluated under NEPA also change with time. *See Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 551-53 (1978).[8] The monitoring and study of nuclear power in this country and around the world annually produce volumes of new environmental and safety information, widely disseminated to the scientific community and the public, some of which can be regarded as altering the cost/benefit balance struck by the NRC when the construction permit or operating license was issued. And, of course, whenever a court discovers novel environmental impacts, such as "psychological distress" or "uncertainties",[9] this may create a need to supplement the environmental impact statement for every reactor licensed prior to the date of the court's decision.

---

[8] Effective April 26, 1982, the NRC has adopted rules excluding consideration of need for power and alternative energy source issues in operating license proceedings. *See* 47 Fed. Reg. 12,940 *et seq.* (March 26, 1982) (amending 10 C.F.R. §§ 51.21, 51.23(e), 51.53). The NRC stated that these issues are considered thoroughly at the construction permit stage and experience has shown that repeated consideration at the operating license stage is unlikely to tip the NEPA cost/benefit analysis against issuance of an operating license for a plant which has already been completed. *Id.* This reasoning would also apply to preclude reconsideration of these issues in supplemental environmental impact statements. However, it is unknown whether this new rule will survive a "hard look" by the D.C. Circuit. (*See* Met. Ed. App. A at 26a and n.20; *Natural Resources Defense Council, Inc.* v. *NRC* (*Vermont Yankee III*, Nos. 74-1586, 77-1448, 79-2110, and 79-2131 (D.C. Cir. June 30, 1982) (Statement of Senior Circuit Judge Bazelon as to why he voted to deny rehearing)).

[9] *See Natural Resources Defense Council, Inc.* v. *NRC (Vermont Yankee III)*, Nos. 74-1586, 77-1448, 79-2110 and 79-2181 (D.C. Cir. April 27, 1982).

Even if the NRC determines that the alleged new circumstances or information do not require preparation of a supplemental environmental impact statement, the burden of justifying such decisions is likely to be significant. The court below suggests that the NRC must undertake "at least a preliminary investigation" to determine whether the claimed information or circumstances are new or significant, before it makes a decision not to prepare a supplemental environmental impact statement. (Met. Ed. App. A at 26a and n.20). And the results of this investigation must presumably be documented in a negative declaration and environmental assessment, or some other fashion to permit judicial review. *See* 10 C.F.R. § 51.7 (1982); 40 C.F.R. § 1508.9 (1981).

Critics of nuclear power will not hesitate to use the decision of the court below, which in this respect is not limited to TMI-1, to seek the preparation of additional environmental impact statements and further judicial review of the NRC's compliance with the strictures of NEPA. The NRC licensing process will thereby lose all semblance of finality.

B. The Court of Appeals' Ruling that the Issuance of an Operating License for a Nuclear Power Plant Is Subject to Continual Reconsideration Under NEPA Is Contrary to the Concept of Finality of Agency Action and to the Intent of Congress Expressed in the Atomic Energy Act.

The effect of the court of appeals' decision is to make operating licenses issued for periods of up to forty years terminable at will, based on continual federal environmental cost/benefit balancing. This is directly contrary to the intent of Congress in enacting Section 103(c) of the Atomic Energy Act of 1954, 42 U.S.C. § 2133(b) (1976), which authorizes the NRC to issue commercial operating licenses for a "specified period . . . not to exceed forty years."[10] This forty year period

[10] Congress did of course provide that operating licenses may be modified, suspended or revoked at any time for *safety* reasons. *See* 42 U.S.C. §§ 2236, 2237 (1976).

was chosen to provide a sufficient economic incentive to encourage utilities to build nuclear power plants.[11]

The court of appeals' decision offers minimal legal justification for destroying the finality contemplated by the Atomic Energy Act of 1954. As Judge Wilkey points out in his lucid dissent, NEPA applies only to proposals for major federal action. (Met. Ed. App. A at 49a). *See Weinberger* v. *Catholic Action of Hawaii*, ___ U.S. ___, 102 S.Ct. 197, 203 (1981); *Kleppe* v. *Sierra Club*, 427 U.S. 390, 398-406 (1976); *Aberdeen & R.R. Co.* v. *SCRAP*, 422 U.S. 289, 320, 322 (1975). A utility's operation of a nuclear power plant within the terms of its license does not involve a *proposal* for federal action. The

[11] The first proposal in April, 1954 to amend the Atomic Energy Act of 1946 provided for a 25 year limitation on operating licenses. Joint Comm. on Atomic Energy, 83d Cong., 2d Sess., *A Proposed Act to Amend the Atomic Energy Act of 1946* 21 (Comm. Print April 1954), *reprinted in* 1 U.S.A.E.C., Legislative History of the Atomic Energy Act of 1954, at 81 (1955). However, in hearings held before the Joint Committee on Atomic Energy in May, 1954, a representative of interested public utilities testified that the need to finance and amortize nuclear facilities over a 25 year period would place an undue price burden on nuclear generated electricity in relation to electricity generated with conventional fuels. He encouraged Congress either to extend the operating license period to 40 years (the normal amortization period in the electric utility industry) or add a statutory provision which would allow utilities to "count absolutely" on renewal of their operating licenses after 25 years. *S. 3323 and H.R. 8862 to Amend the Atomic Energy Act of 1946: Hearings Before the Joint Committee on Atomic Energy*, 83d Cong., 2d Sess., 230-31 (1954) (Statement of E.H. Dixon), *reprinted in* 2 U.S.A.E.C., *Legislative History of the Atomic Energy Act of 1954*, at 1864-65 (1955). Apparently in response to this testimony, the Joint Committee amended the proposed bill to extend the maximum operating license period to 40 years. Joint Comm. on Atomic Energy, 83d Cong., 2d Sess., *Draft in Bill Form* 41 (Copm. Print May 21, 1954) *reprinted in* 1 U.S.A.E.C., *Legislative History of the Atomic Energy Act of 1954*, at 297 (1955). It was this latter proposal which became law on February 17, 1954. Atomic Energy Act of 1954, ch. 703, 68 Stat. 919 (1954).

licensee's operation of the plant, and the government's continuing safety oversight, were both included in the proposal which was reviewed and approved under NEPA when the operating license was issued; such operation no longer in theory or in fact constitutes a *proposal.*[12] Only if the utility requests an amendment to the operating license, or the NRC pursuant to its continuing safety oversight responsibilities seeks to impose additional requirements not in the license, is there a proposal for federal action within the meaning of NEPA. In that event review under NEPA is confined to the environmental impact of the proposal itself, rather than the environmental costs and benefits of continued operation of the nuclear power plant. *See, e.g. Portland General Electric Company* (Trojan Nuclear Plant), ALAB-531, 9 N.R.C. 263, 266 n.6 (1979).

In other contexts, the court of appeals has been willing to concede that

> [W]e cannot allow NEPA to be bloated, and indeed enfeebled, by pushing the logic of Section 102(2)(C) to ridiculous extremes. NEPA does not require an annual EIS on routine operation and maintenance of every program with significant environmental ramifications. Its rule of reason does not demand rethinking of everything all the time.

Sierra Club v. *Andrus,* 581 F.2d 895, 906 (D.C. Cir. 1978), *rev'd on other grounds,* 442 U.S. 347 (1979). But as Judge Wilkey has pointed out, where nuclear power is concerned, the court of appeals apparently believes there is no such thing as taking "too hard a look." *Natural Resources Defense Council,*

---

[12] This distinction is similar to one made by this Court in *Andrus* v. *Sierra Club,* 442 U.S. 347 (1979). In that case the court of appeals had held that appropriations requests constitute "proposals for ... major Federal actions" under NEPA. This Court reversed, stating "[T]his interpretation distorts the language of the Act, since appropriation requests do not 'propose' federal actions at all; they instead fund actions already proposed." 442 U.S. at 361-62.

Inc. v. *NRC (Vermont Yankee III)*, Nos. 74-1586, 77-1448, 79-2110 and 79-2131, slip op. at 2 (D.C. Cir. April 27, 1982) (Wilkey, J. dissenting). The ruling of the court of appeals has deprived the NRC licensing process of any finality, and thus is likely to discourage continued private development of nuclear power. Even if the rewards are great, few will be willing to run the gauntlet if the gauntlet never ends.

CONCLUSION

Four years ago, the Supreme Court admonished the court of appeals that:

> Nuclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try nuclear energy, establishing a reasonable review process in which courts are to play only a limited role. The fundamental policy questions appropriately resolved in Congress and in the state legislatures are *not* subject to reexamination in the federal courts under the guise of judicial review of agency action.

Vermont Yankee Nuclear Power Corp. v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 557-58 (1978) (emphasis in original). There is nothing in the circumstances surrounding the proposed restart of TMI-1 which justifies the new roadblocks which the court of appeals has thrown in the path of resumed operation of TMI-1 and continued operation of other nuclear reactors. The court's decision represents an unwarranted departure from the ground rules laid down in *Vermont Yankee*. As Judge Wilkey stated:

> Congress knows everything that [the Court of Appeals for the D.C. Circuit] knows—and more—about the accident at TMI-2. When the standards by which the agency is to act under either NEPA or AEA are to be changed, Congress will determine in what direction and degree.

Met. Ed. App. A at 68a.

The court of appeals' decision should be summarily reversed. If, however, this Court believes summary reversal is inappropriate, then it should take up and consider the issue of whether all nuclear power plants must continually be subject to reassessment under NEPA, as well as the psychological distress issue raised by Petitioners.

Respectfully submitted,

MICHAEL I. MILLER
Counsel of Record

LINDA L. HODGE
Staff Counsel
Atomic Industrial Forum, Inc.
7101 Wisconsin Avenue
Washington, D.C. 20014

PHILIP P. STEPTOE
Isham, Lincoln & Beale
Suite 5200
Three First National Plaza
Chicago, Illinois 60602
(312) 558-7500
Attorneys For Amicus Curiae

ON FILED
SEP 30

No. 81-2399
No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM 1982

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY
and PENNSYLVANIA ELECTRIC COMPANY
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

MOTION FOR LEAVE TO FILE A BRIEF AMICUS CURIAE AND BRIEF AMICUS CURIAE ON BEHALF OF THE CHAMBER OF COMMERCE OF THE UNITED STATES IN SUPPORT OF THE PETITIONS FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

Of Counsel:

STEPHEN A. BOKAT
STANLEY T. KALECZYC
CYNTHIA WICKER

National Chamber
Litigation Center
1615 H Street, N.W.
Washington, D.C. 20062
(202) 463-5337

MICHAEL F. BUTLER
Counsel of Record
NANCY W. NEWKIRK

ANDREWS & KURTH
1747 Pennsylvania Avenue, N.W.
Washington, D.C. 20006
(202) 861-7400

Attorneys for Amicus Curiae
The Chamber of Commerce of
the United States

No. 81-2399
No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM 1982

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY
and PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION
AND THE UNITED STATES OF AMERICA
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

MOTION OF THE CHAMBER OF COMMERCE OF THE UNITED STATES FOR LEAVE TO FILE A BRIEF AMICUS CURIAE

Pursuant to Rule 36 of the Rules of this Court, The Chamber of Commerce of the United States ("Chamber") hereby moves for leave to file the attached brief *amicus curiae*

in support of Petitioners. In support of this motion the Chamber states:

1. The Chamber is the largest federation of business organizations in the United States. At present, the Chamber has in excess of 250,000 members, including over 240,000 corporations, partnerships, proprietorships and individuals, as well as 1,350 trade associations, and 2,700 local and state chambers of commerce.

2. The Chamber regularly presents its members' views to the courts on issues of broad importance to its members, and often files briefs in support of petitions for writs of certiorari.*

3. The National Environmental Policy Act, 42 U.S.C. §§ 4321-4347 ("NEPA"), is a very broad statute that impacts upon much of the activities of federal agencies, including licensing and permit procedures of regulatory agencies. Many of the Chamber's members, in the normal course of their businesses, become involved in projects that must withstand scrutiny under NEPA.

4. Because the application of NEPA is so pervasive, it is important that it be interpreted in a manner that serves its purposes, but does not unduly infringe upon matters that are beyond its purview.

5. The decision of the Court of Appeals expands the scope of NEPA well beyond the intent of Congress and has extremely significant potential impact on many federal programs and activities and on many matters of direct concern to the members of the Chamber. Because the decision represents an extreme case of "judicial legislating", the Chamber believes that review by this Court is critical.

---

* *See e.g., First National Maintenance Corp.* v. *NLRB*, 449 U.S. 1076 (1981); *Northwest Airlines* v. *Transport Workers of America, AFL-CIO, et al.*, 447 U.S. 920 (1980); *Rockwell International Corp.* v. *City of New York, et al.*, No. 81-904, ____U.S.____, 102 S.Ct. 1038 (Jan. 11, 1982); *Weyerhaeuser Company, et al v. Lyman Lamb Co., et al.*, Nos. 81-1618, 81-1619, ____U.S. ____, 102 S.Ct. 2232 (May 17, 1982).

For these reasons the Chamber requests the permission of the Court to file the attached brief which sets forth more fully its views on the need for review of this case.

Respectfully submitted,

Of Counsel:

STEPHEN A. BOKAT
STANLEY T. KALECZYC
CYNTHIA WICKER

National Chamber
Litigation Center
1615 H Street, N.W.
Washington, D.C. 20062
(202) 463-5337

MICHAEL F. BUTLER
Counsel of Record
NANCY W. NEWKIRK

ANDREWS & KURTH
1747 Pennsylvania Avenue, N.W.
Washington, D.C. 20006
(202) 861-7400

Attorneys for Amicus Curiae
The Chamber of Commerce of
the United States

TABLE OF CONTENTS

	Page
STATEMENT OF INTEREST	2
STATEMENT OF THE CASE	2
REASONS FOR GRANTING THE WRIT	2
I. THE COURT OF APPEALS' DECISION THAT PSYCHOLOGICAL STRESS CONSTITUTES AN ENVIRONMENTAL EFFECT UNDER NEPA NECESSARILY REQUIRES THAT THE ANALYSIS OF PSYCHOLOGICAL FACTORS BE SUBJECT TO THE FULL RANGE OF NEPA PROCEDURES	4
II. THE DECISION OF THE COURT OF APPEALS ON THE CONTINUING NEPA OBLIGATION IS CONTRARY TO THE BASIC STRUCTURE OF NEPA	7
III. THE DECISION OF THE COURT OF APPEALS ON PSYCHOLOGICAL STRESS IS AN UNREASONABLE EXTENSION OF NEPA	9
CONCLUSION	12

TABLE OF AUTHORITIES

	Page
CASES	
Hanley v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973)	10
ICC v. New Jersey, 322 U.S. 503 (1944)	8,9
Kleppe v. *Sierra Club*, 427 U.S. 390 (1976)	8
Natural Resources Defense Council v. *Morton*, 458 F.2d 827 (D.C. Cir. 1972)	6,10
Strycker's Bay Neighborhood Council, Inc. v. *Karlen*, 444 U.S. 223 (1980)	8
United States v. *Students Challenging Regulatory Agency Procedures*, 412 U.S. 669 (1973)	8
Vermont Yankee Nuclear Power Corp. v. *Natural Resources Defense Council*, 435 U.S. 519 (1978)	8,11
Weinberger v. *Catholic Action of Hawaii/Peace Education Project*, No. 80-1377, ____ U.S. ____, 102 S.Ct. 197 (Dec. 1, 1981)	5
STATUTES AND REGULATIONS	
National Environmental Policy Act, 42 U.S.C. §§4321-4347	*passim*
42 U.S.C. §4332(2)	6
42 U.S.C. §4332(2)(C)	2,3,5,6
42 U.S.C. §7609	6
40 C.F.R. §1500-1508	*passim*
40 C.F.R. §1500.3	5
40 C.F.R. §1501.4	5
40 C.F.R. §1501.4(a)	5
40 C.F.R. §1501.4(b)	5
40 C.F.R. §1502.1	5,10

	Page
40 C.F.R. §1502.4	7
40 C.F.R. §1502.5	7
40 C.F.R. §1502.9	6
40 C.F.R. §1502.9(c)(1)	7
40 C.F.R. §1502.14	6,10
40 C.F.R. §1502.16	6,10
40 C.F.R. §1502.19	6
40 C.F.R. §1502.24	6,10
40 C.F.R. §1503.2	6
40 C.F.R. §1503.4	6
40 C.F.R. §1504.1	6
40 C.F.R. §1504.3	6
40 C.F.R. §1505.2(c)	8
40 C.F.R. §1507.1	5
40 C.F.R. §1507.2	6
40 C.F.R. §1508.9	5
40 C.F.R. §1508.17	5
40 C.F.R. §1508.18	5
40 C.F.R. §1508.23	7

MISCELLANEOUS

Environmental Quality 1979, Tenth Annual Report of the Council on Environmental Quality	4,5
Environmental Quality 1980, Eleventh Annual Report of the Council on Environmental Quality	4
Environmental Quality 1981, 12th Annual Report of the Council on Environmental Quality	4

No. 81-2399
No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM 1982

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY
and PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

BRIEF AMICUS CURIAE OF THE CHAMBER OF COMMERCE OF THE UNITED STATES IN SUPPORT OF PETITIONS FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

This brief is filed on behalf of The Chamber of Commerce of the United States ("Chamber") contingent upon the Court's

granting the Motion for Leave to File a Brief Amicus Curiae to which this brief is attached.

STATEMENT OF INTEREST

The interest of the Chamber is set forth in its Motion for Leave to File a Brief Amicus Curiae. The Chamber respectfully refers the Court to the Motion.

STATEMENT OF THE CASE

As set forth in detail in the two petitions for writ of certiorari, this case concerns the restart of a previously operating nuclear power plant near Harrisburg, Pennsylvania, known as Three Mile Island Unit 1 ("TMI-1"). A second nuclear plant at the same site ("TMI-2") had previously suffered an accident affecting its reactor and the restart of TMI-1 was postponed for various reasons. Upon appeal by respondent, People Against Nuclear Energy, the Court of Appeals (in a split decision with Judge Wilkey dissenting) reversed a decision of the Nuclear Regulatory Commission ("Commission") and held that the psychological stress of a restart of TMI-1 on the residents of the Three Mile Island area constituted an environmental effect that must be considered by the Commission under Section 102(2)(C) of the National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. § 4332(2)(C). The Court of Appeals then remanded the case to the Commission to determine whether there was sufficient new information or changed circumstances so as to require a supplemental environmental impact statement ("EIS") evaluating the psychological stress and community deterioration that might result from restart of TMI-1.

REASONS FOR GRANTING THE WRIT

The decision of the Court of Appeals greatly expands the requirements of NEPA, 42 U.S.C. §§4321-4347, on federal agencies and thus imposes substantial new burdens on persons

whose activities are affected by federal actions subject to NEPA. Review of that decision by this Court is justified because of the broad impact of the decision nationwide and because it exceeds the proper role of the Court of Appeals by substituting its policy judgment for the judgment of Congress.[1]

Section 102(2)(C) of NEPA, 42 USC §4332(2)(C), provides that all agencies of the Federal Government shall—

> . . . .
>
> (C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement . . . on
>
> (i) the environmental impact of the proposed action,
>
> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
>
> (iii) alternatives to the proposed action,
>
> (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
>
> (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.
>
> . . . .

The decision of the Court of Appeals greatly expands this provision in two respects. First, it holds that the NEPA obligation is not limited to the separate occasions when there is a proposed federal action but rather is a "continuing obligation" by reason of the "continued exercise of supervisory responsibility" by the Commission over the plant. Pet. App. at

[1] Review of the Court of Appeals' decision is also justified because it is in conflict with numerous decisions of other courts of appeals. However, because this ground for review is more than adequately presented in the two separate Petitions filed with this Court in this case we see no need to add to the presentations made there.

19a.[2] Second it holds that the environmental factors that must be considered under NEPA include the psychological stress of federal action permitting restart of TMI-1, but does not require that this stress result from any adverse impact on the environment caused by the federal action. Pet. App. 13a, 16a-17a.

I. THE COURT OF APPEALS DECISION THAT PHYCHOLOGICAL STRESS CONSTITUTES AN ENVIRONMENTAL EFFECT UNDER NEPA NECESSARILY REQUIRES THAT THE ANALYSIS OF PHYCHOLOGICAL FACTORS BE SUBJECT TO THE FULL RANGE OF NEPA PROCEDURES.

The EIS requirements of NEPA impose significant requirements on federal agencies and have significant impact on persons affected by major federal actions. Compliance with the existing EIS process requires a major effort by federal agencies. In 1980 a total of 966 draft, final or supplemental EIS's were filed by federal agencies. *Environmental Quality 1981, 12th Annual Report of the Council on Environmental Quality*, 282. CEQ has not published numbers on how many environmental assessments were prepared in 1980, but has estimated that "thousands" were prepared in 1979. *Environmental Quality 1980, Eleventh Annual Report of the Council on Environmental Quality*, 384. During 1980, 140 separate lawsuits were filed against federal agencies alleging NEPA violations, principally involving whether an agency was required to prepare an EIS or whether the EIS was legally inadequate. *Environmental Quality 1981, supra*, 183, 185.

The NEPA process covers the whole range of federal activities and has an enormous impact on business. For example, in the energy area alone, projects affected by major federal actions and thus subject to the NEPA process include nuclear plants, electric transmission power lines, hydro-electric power projects, outer continental shelf oil and gas lease sales, coal prospecting and mining activities, fossil fuel power plants, oil and gas drilling projects and pipelines. *Environmental*

---

[2] References are to Petitioners' Appendix in Metropolitan Edison Co., No. 81-2399.

Quality 1979, The Tenth Annual Report of the Council on Environmental Quality, 590. As another example, establishment or expansion of a military base may constitute a major federal action and thus be subject to NEPA, *cf. Weinberger v. Catholic Action of Hawaii/Peace Education Project,* No. 80-1377, ____ U.S. ____, 102 S.Ct. 197 (Dec. 1, 1981).

NEPA requires that all federal agencies must consider the environmental impact of proposals for legislation or proposals for other major federal action significantly affecting the quality of the environment. 42 U.S.C. §4332(2)(C). The Council on Environmental Quality ("CEQ") has promulgated regulations defining the obligations NEPA imposes, 40 C.F.R. §§ 1500-1508, and these regulations are binding on all federal agencies. 40 C.F.R. §§ 1500.3, 1507.1.

The CEQ regulations broadly define proposals for "major federal actions." These include actions with effects that "may" be major; actions entirely or partly "financed, assisted, conducted, regulated or approved" by federal agencies; legislative proposals; treaties and international conventions or agreements; adoption of programs; approval of specific projects, including actions approved by permit; etc. 40 C.F.R. §§ 1508.17, 1508.18.

If there is a question whether an activity is a major federal action requiring preparation of an EIS, a federal agency must prepare an environmental assessment. 40 C.F.R. § 1501.4(a), (b). An environmental assessment is a preliminary study to determine whether a full blown EIS is necessary, but nevertheless must itself be a rather comprehensive document. See 40 C.F.R. §§ 1508.9, 1501.4. If the environmental assessment so indicates, the agency is required to prepare an EIS. 40 C.F.R. 1501.4.

An EIS is a detailed written statement that is to provide "full and fair discussion of significant environmental impacts." 40 C.F.R. § 1502.1. The statement "must rigorously explore and objectively evaluate all reasonable alternatives" and discuss the reasons for eliminating other alternatives; "devote

substantial treatment" to each alternative; discuss the "alternative of no action"; and discuss "appropriate mitigation measures." 40 C.F.R. §1502.14. The statement must discuss the environmental consequences of the various alternatives. 40 C.F.R. § 1502.16. The agency is required to identify any scientific methodologies used and make explicit reference to the scientific and other sources relied upon . 40 C.F.R. § 1502.24.

An EIS for a major federal action must be prepared in two stages—draft and final—and may be supplemented. 40 C.F.R. § 1502.9. A draft EIS must satisfy all the requirements for a final EIS. *Id.* A draft EIS must be submitted for comment to the public and any federal agency which has special expertise with respect to the environmental impact involved and such agency must comment on such environmental impact. 40 C.F.R. §§ 1502.19, 1503.2. The final EIS must respond to all comments received and such response must be either to modify the alternatives included in the proposed action, develop and evaluate new alternatives, supplement or modify the agency's analysis, make factual corrections or explain in detail why the comments do not warrant further response. 40 C.F.R. § 1503.4.

A federal agency reviewing an EIS may make a judgment on the acceptability of the anticipated environmental impacts and refer the matter to CEQ if they are unsatisfactory. 40 C.F.R. § 1504.1; 42 U.S.C. § 4332(2)(C); 42 U.S.C. § 7609. After such referral CEQ may take various actions including holding hearings and further referring the matter to the President. 40 C.F.R. § 1504.3.

Every agency of the federal government is required to have the resources and personnel to comply with the requirements of Section 102(2) of NEPA, 42 U.S.C. § 4332(2). 40 CFR § 1507.2.

Finally, private litigants may obtain an injunction against proposed major federal action if the agency fails to prepare an EIS, or if the EIS is inadequate because of failure adequately to consider the various effects on the environment, or reasonable alternatives to the proposed action. *Natural Resources Defense Council v. Morton,* 458 F.2d 827 (D.C. Cir. 1972).

In short, the NEPA process is an extensive one. It requires significant expenditure of federal agency resources and takes considerable time to accomplish. Private persons affected by a proposed major federal action may sue to force an agency to comply with its NEPA obligations. Thus, the Court of Appeals decision that psychological stress constitutes an environmental effect under NEPA means that an agency will have no choice but to apply the full panoply of NEPA requirements to any proposed major action where psychological stress is alleged—*e.g.*, analysis of the psychological stress, evaluation of alternatives, discussion of mitigation measures, referral to other agencies, etc. Alleged failure to comply with these requirements will subject an agency to litigation to compel compliance. Such litigation in turn may result in considerable expenditures in litigation and considerable costs occasioned by delay in taking the proposed federal action, both by the federal agency and by private persons benefiting from the proposed action.

II. THE DECISION OF THE COURT OF APPEALS ON THE CONTINUING NEPA OBLIGATION IS CONTRARY TO THE BASIC STRUCTURE OF NEPA.

At present the NEPA process is required only for a *proposed* major federal action. Although the CEQ regulations provide for a "supplemental" EIS, it is required only "if (i) The agency makes substantial changes in the *proposed* action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the *proposed* action or its impacts." 40 C.F.R. § 1502.9(c)(1). (emphasis added.) *See also,* 40 C.F.R. 1508.23 where "proposal" is defined and 40 C.F.R. § 1502.5 discussing the timing of preparation of an EIS. Where broad actions are involved, the CEQ regulations provide for an EIS on the broad proposal and for subsequent EIS's on the more narrow subsequent proposed actions. 40 C.F.R. § 1502.4. Thus, if there is no proposed major federal action but merely an ongoing activity subject to federal regulation there is no requirement to prepare a supplemental EIS.

Although the petitions for certiorari in this case do not present for review the question whether NEPA is applicable when there is no proposed major federal action, Petitioners,

The United States of America and the United States Nuclear Regulatory Commission, in No. 82-358 suggest that although the Court of Appeals' decision on this point was wrong it was dictum unnecessary for resolution of the case.[3] Petitioners in No. 82-358 further request that they not be considered to have waived the question if the Court concludes otherwise. Because of the importance of this issue in its application to federal agencies that have ongoing supervisory functions, the Chamber urges the Court to conclude that this issue is properly presented.

The Court of Appeals' concept of a "continuing obligation" when there is no proposed action is contrary to the basic idea underlining NEPA. NEPA essentially establishes a detailed procedural arrangement prior to a decision on a proposed federal action that requires a thorough analysis of possible environmental effects so they may be considered in making the decision. *Kleppe v. Sierra Club*, 427 U.S. 390, 417-418 (1976) (concurring and dissenting opinion). NEPA does not require that environmental factors control a decision on a proposed federal action, only that they be taken into account. Nor is NEPA a general regulatory statute requiring federal agencies to take continual action on all matters within their authority to improve the quality of the environment. *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227-8 (1980); *United States v. Students Challenging Regulatory Agency Procedures*, 412 U.S. 669, 694 (1973); *see also*, 40 C.F.R. § 1505.2(c) which makes it clear that NEPA does not require that an agency take action to avoid or minimize environmental harm, but rather only that it explain why it did not. Thus, it is nonsensical to impose the NEPA process after a decision is made and when there is no proposed action, and the imposition of NEPA requirements in that situation adds an

[3] As discussed in footnotes 11 and 12 of the Petition in No. 82-358, the Court of Appeals could have held that the pending decision of the Commission whether to restart TMI-1 constituted a proposed major federal action thus triggering the NEPA process. Such a holding by the Court of Appeals would not have broad applicability to other federal agencies. However, the Court of Appeals decision in this case was not based on such an analysis but rather on the broad statement that the Commission has a "continuing obligation to comply with NEPA" (Pet. App. 19a) whether or not there is any proposed action.

unnecessary burden that serves no useful purpose. *See, Vermont Yankee Nuclear Power Corporation v. Natural Resources Defense Council,* 435 U.S. 519, 554-5 (1978), *quoting ICC v. Jersey City,* 322 U.S. 503 (1944). Permitting the Court of Appeals' decision on this point to stand uncorrected could turn the already extensive NEPA procedure into an unending process subject to the whims of imaginative interest groups seeking to have a federal agency institute a new environmental study of some new information possibly relating to the environmental effect of an existing activity.

III. THE DECISION OF THE COURT OF APPEALS ON PSYCHOLOGICAL STRESS IS AN UNREASONABLE EXTENSION OF NEPA.

Although the decision of the Court of Appeals suggests in places that it may be limited to the unique situation arising from the accident to the reactor at TMI-2 (Pet. App. 16a-17a), the decision goes on to say that "we need not attempt to draw a bright line". *Id* at 17a. More importantly, as discussed at length in Judge Wilkey's dissent (*Id* at 43a-48a), it is impossible to find a rational basis for limiting the decision to a situation where an action is proposed after a traumatic event in the same locale affected by the proposed action. Thus, it takes no imagination to conclude that the Court of Appeals' decision could require the Defense Department to consider the psychological stress on the surrounding community of having a potential military target nearby as the result of establishment or expansion of a military base in a particular locale. Likewise under the Court of Appeals' decision, submission to the Senate of a nuclear test ban treaty or amendments to the NATO Treaty could very well require an EIS on the psychological stress that might be engendered by such treaties. Or the Federal Aviation Administration could be required to consider the psychological stress on the community caused by operation of an airport because of fear of a plane crash.[4]

It requires no citation of authority to note that psychological assessments are often amorphous, imprecise and

[4] These and other possibilities would be even more far reaching if the Court of Appeals' concept of a "continuing obligation" were applicable to the situations.

considerably in dispute even by professionals in the mental health field. Controversy over the insanity defense in criminal trials provides an obvious example. *See also, Hanley v. Kleindienst,* 471 F.2d 823 (2d Cir. 1972), *cert. denied,* 412 U.S. 908 (1973), where the court noted in footnote 10 "... psychological factors are not readily translatable into concrete measuring rods." 471 F.2d 823, 833. The Court of Appeals' decision on psychological stress means that such an inherently ambiguous assessment is subject to the mandatory requirements of the NEPA process discussed in Section I which provide that the agency must discuss "significant environmental impacts"; "must rigorously explore and objectively evaluate all reasonable alternatives"; discuss all "appropriate mitigation measures"; describe the "scientific methodologies used"; etc. 40 C.F.R. §§ 1502.1, 1502.14, 1502.16, 1502.24. Since an EIS dealing with psychological stress must provide "full and fair discussion" of these matters, 40 C.F.R. § 1502.1, the agency's evaluation would seem almost certainly subject to litigation complaining that it was legally insufficient because it failed adequately to consider conflicting psychological views and conflicting views on how to mitigate psychological stress. Given the state of psychological knowledge, plaintiffs should have no difficulty in finding respectable opinion in conflict with the agency's analysis. The effect of the decision is thus to provide an enormously effective means for delaying federal action by an injunction proceeding based on the failure of an EIS adequately to consider other psychological contentions. *See, Natural Resources Defense Council v. Morton,* 458 F.2d 827 (D.C. Cir. 1972).

Another effect of the Court of Appeals' decision is to require new budgetary and personnel resources in federal agencies to deal with psychological environmental impacts. Also, since a draft EIS must be submitted for comment to any federal agency with special expertise concerning the environmental impact involved, as indicated in Section I above, the Court of Appeals decision presumably will require the National Institute of Mental Health to assume a role in reviewing agency EIS's on psychological stress, a function that the Congress was rather unlikely to have had in mind for the National Institute.

Although some of the potential ramifications of the Court of Appeals decision might be desirable as a matter of public policy, extension of NEPA to cover psychological stress is more properly a function of Congress to direct by statute. The decision of the Court of Appeals is totally at variance with the observation of this Court in *Vermont Yankee Nuclear Power v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 558 (1978):

> NEPA does set forth significant substantive goals for the Nation, but its mandate to the agencies is essentially procedural. See 42 U.S.C. § 4332. See also *Aberdeen & Rockfish R. Co. v. SCRAP*, 422 U.S., at 319, 95 S. Ct., at 2355. It is to insure a fully informed and well-considered decision, not necessarily a decision the judges of the Court of Appeals or of this Court would have reached had they been members of the decisionmaking unit of the agency. Administrative decisions should be set aside in this context, as in every other, only for substantial procedural or substantive reasons as mandated by statute, *Consolo* v. *FMC*, 383 U.S. 607, 620, 86 S.Ct. 1018, 1026, 16 L.Ed.2d 131 (1966), not simply because the court is unhappy with the result reached.

Psychological review of a proposed major federal action would be complex, time consuming and difficult. Moreover, it is unlikely that any federal agency has the staff or competence to perform such task. To impose such a requirement full blown from the present NEPA statute which is silent on the subject is an extraordinary piece of judicial legislation that should be reviewed and reversed by this Court. If such a broad and far reaching requirement is imposed it should be done by clear Congressional action which, through statutory language, hearings, reports and debate, would provide discussion and guidance on the scope of the requirement and the procedures to be followed in its application.

CONCLUSION

The Chamber respectfully urges that the petitions for certiorari be granted.

Respectfully submitted,

Of Counsel:

STEPHEN A. BOKAT
STANLEY T. KALECZYC
CYNTHIA WICKER

National Chamber
Litigation Center
1615 H Street, N.W.
Washington, D.C. 20062
(202) 463-5337

MICHAEL F. BUTLER
Counsel of Record
NANCY W. NEWKIRK

ANDREWS & KURTH
1747 Pennsylvania Avenue, N.W.
Washington, D.C. 20006
(202) 861-7400

Attorneys for Amicus Curiae
The Chamber of Commerce of
the United States

Office - Supreme Court, U.S.
FILED
SEP 30 1982
ALEXANDER L. STEVAS,
CLERK

No. 81-2390 and No. 82-356

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON CO., *et al.*, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and
THE UNITED STATES OF AMERICA, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The District Of Columbia Circuit

BRIEF *AMICUS CURIAE* OF EDISON ELECTRIC INSTITUTE IN SUPPORT OF PETITIONERS

ROBERT L. BAUM
Counsel of Record
PETER B. KELSEY
EDWARD H. COMER
WILLIAM L. FANG
EDISON ELECTRIC INSTITUTE
1111 19th Street, N.W.
Washington, D.C. 20036
(202) 828-7679

September 30, 1982

PRESS OF BYRON S. ADAMS PRINTING, INC., WASHINGTON, D.C.

QUESTION PRESENTED

Whether, in addition to the Nuclear Regulatory Commission's consideration and evaluation of the environmental impacts of the actual operation of a nuclear power plant, the National Environmental Policy Act, 42 U.S.C. § 4332(2)(C), requires the Commission to consider and predict impacts on the psychological health of area residents that may result from their fears concerning the operation of that plant.

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	iii
INTEREST OF *AMICUS CURIAE*	2
SUMMARY OF ARGUMENT	5
ARGUMENT	7
The Court Of Appeals' Decision With Respect To Psychological Health Violates The Rule Of Reason Consistently Applied To NEPA And Is Inconsistent With Prevailing Judicial Decisions	7
CONCLUSION	15

TABLE OF AUTHORITIES

CASES

Page

Aberdeen & Rockfish R. R. Co. v. *SCRAP*, 422 U.S. 289 (1975) 5

Como-Falco Coalition v. *Department of Labor*, 465 F. Supp. 850 (D. Minn. 1978), *aff'd*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980) 9

Hanly v. *Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) 8, 9

Kleppe v. *Sierra Club*, 427 U.S. 390 (1976) 5

Maryland-National Capital Park & Planning Commission v. *United States Postal Service*, 487 F.2d 1029 (D.C. Cir. 1973) 9

Natural Resources Defense Council v. *Morton*, 458 F.2d 827 (D.C. Cir. 1972) 6, 7, 8

New York v. *Kleppe*, 429 U.S. 1307 (1976) 6, 7

Nucleus of Chicago Homeowners Association v. *Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976) 9

People Against Nuclear Energy v. *Nuclear Regulatory Commission*, 678 F.2d 222 (D.C. Cir. 1982) ... *passim*

Trinity Episcopal School Corp. v. *Romney*, 387 F. Supp. 1044 (S.D.N.Y. 1974), *rev'd and remanded in part on other grounds*, 523 F.2d 88 (2d Cir. 1975) 9

Vermont Yankee Nuclear Power Corp. v. *Natural Resources Defense Council*, 435 U.S. 519 (1978) ... 7, 13

Weinberger v. *Catholic Action of Hawaii*, ___ U.S. ___, 102 S.Ct. 197 (1981) 5

STATUTES

National Environmental Policy Act, § 102(2)(C), 42 U.S.C. § 4332(2)(C) (1976) ..... *passim*

MISCELLANEOUS

Energy Information Administration, U.S. Department of Energy, *Quarterly Report: Energy Information* (July 2, 1982) 3

47 *Federal Register* 31762 (1982) 14

Table of Authorities Continued

Page

In the Matter of Metropolitan Edison Company, 11 NRC 297 (1980) 6, 12

U.S. Nuclear Regulatory Commission, *Facilities License Application Record*, NUREG-0652, Vol. 1, No. 3 (February 1982) 3

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399 and
No. 82-358

METROPOLITAN EDISON CO., *et al.*,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and
THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

BRIEF *AMICUS CURIAE* OF EDISON ELECTRIC INSTITUTE IN SUPPORT OF PETITIONERS

Edison Electric Institute ("EEI") hereby submits its brief *amicus curiae* in support of petitions for a writ of certiorari filed by Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company ("Utility Petition") on July 1, 1982, and the United States and the United States Nuclear Regulatory Commission ("Government Petition") on August 30,

1982.[1] Petitioners seek the United States Supreme Court's ("the Court") review of a decision by the United States Court of Appeals for the District of Columbia Circuit ("Court of Appeals") that Section 102(2)(C) of the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4332(2)(C) (1976), requires the Nuclear Regulatory Commission ("NRC"), in addition to its consideration and evaluation of the environmental impacts of the actual operation of a nuclear power plant, to consider "the potential psychological health effects" of its proposed action on area residents resulting from their fears concerning the operation of that plant. *People Against Nuclear Energy* v. *Nuclear Regulatory Commission*, 678 F.2d 222, 235 (D.C. Cir. 1982)[2] ("*PANE*").

INTEREST OF *AMICUS CURIAE*

EEI is the national association of investor-owned electric utility companies in the United States. Its members serve 99.6 percent of all customers of the investor-owned segment of the utility industry and 77 percent of the nation's electricity users. This case concerns matters of considerable importance to EEI's members who now or may in the future hold licenses and permits issued by federal agencies and are or will be subject to federal regulatory control.

---

[1] EEI has obtained the written consent of all parties to this case to the filing of this brief. The written consents have been filed with the Clerk of this Court.

[2] Judge Wright, joined by Judge McGowan, constituted the majority on the NEPA issue. Judge Wilkey dissented on this issue. Since petitioners seek review only of the NEPA issue, we will refer to Judge Wright's opinion on the NEPA issue as the majority and to Judge Wilkey's opinion as the dissent.

The decision by the Court of Appeals in *PANE* holds that psychological health issues are cognizable under Section 102(2)(C) of NEPA. This will mean that federal agencies must predict the psychological impacts of their actions and, when such impacts are significant, analyze them in an environmental impact statement ("EIS").

This decision directly affects all those nuclear utilities which are regulated by the NRC. EEI member companies currently operate 69 of the nation's 80 nuclear power plants licensed to operate by the NRC, and expect to operate an additional 61 units now under construction or in planning.[3] Psychological health issues have been introduced in at least seven proceedings before the NRC, each of which involves an investor-owned electric utility member or members of EEI. Utility Pet. at 9 n.11. These and other EEI members with nuclear operations have a direct interest in this case.

The effect of the Court of Appeals' decision, however, is not limited just to EEI members with an interest in nuclear power. Virtually every electric generation facility is subject to federal regulatory control through permitting or licensing activities which are likely to trigger the requirements of NEPA, regardless of the energy source of the facility. In addition to the licensing of nuclear power plants, NEPA is applied to the licensing of hydroelectric facilities by the Federal Energy Regulatory Commission and the issuance of federal permits necessary for the operation of coal-powered plants. The

---

[3] U.S. Nuclear Regulatory Commission, *Facilities License Application Record*, NUREG-0652, Vol. 1, No. 3 (February 1982) (updated through September 7, 1982). As of March 31, 1982, there were a total of 156 reactor units in a planning, construction or operating stage. Energy Information Administration, U.S. Department of Energy, *Quarterly Report: Energy Information* 39 (July 2, 1982).

construction of transmission lines through federal lands, streams, swamps or other wetlands also requires federal approvals and permits which may trigger the requirements of NEPA. Other activities necessary for the efficient operation of electric utility facilities, such as the transportation of nuclear fuel or nuclear waste, similarly require federal approvals and determinations which may trigger the provisions of NEPA. By requiring consideration of psychological health issues under NEPA, the Court of Appeals' decision expands the factors to be analyzed in the decision-making process applicable to significant aspects of electric utility operations.

As a national association, EEI is in a position to represent a broad spectrum of interest and impact arising from the decision below. This brief *amicus curiae* discusses from a national perspective the extent of the impact of the Court of Appeals' decision on the federal government and private industry and demonstrates that the decision improperly expands the procedural requirements of NEPA in contravention of the statutory language and relevant judicial decisions.[4]

---

[4] In addition to the issue presented, EEI shares the view of the Government Petitioners (Gov. Pet. at 17-18 n. 12) that the Court of Appeals, while not compelled to do so under the facts of this case, has reached far beyond NEPA and apposite court decisions by stating that the NRC's continuing regulatory responsibility over licensed nuclear plants is a "Federal action" under Section 102(2)(C) of NEPA. 678 F.2d at 231-232. Thus, the majority would require, even in the absence of a proposed action, that the NRC continually analyze changed conditions and new information to determine their threshold significance and, where such significance is found, embark on the full

SUMMARY OF ARGUMENT

The prevailing view of the federal courts has been that Section 102(2)(C) of NEPA, 42 U.S.C. § 4332(2)(C), does not require federal agencies to consider or predict the psychological health impacts that may result from the public's fears concerning a proposed federal action. Judge Wilkey's dissent notes two bases for these holdings. 678 F.2d at 240. Psychological concerns are too far removed from the underlying purpose of NEPA, which is to ensure that an agency considers the environmental impacts of a proposed action, not the reactions of potentially affected individuals to the risk of those environmental impacts. In

---

EIS process. As Judge Wilkey observed, "[t]his is a holding of considerable breadth." 678 F.2d at 244.

We agree with the Government and Utility Petitioners that the position of the court below is erroneous. Gov. Pet. at 17-18 n.12; Utility Pet. at 7 n.10. This position conflicts with prior decisions of this Court which have confirmed that the trigger for Section 102(2)(C) of NEPA is a specific proposal for a major federal action having a significant environmental impact, such as to approve, disapprove, amend or otherwise change a program or project. *Aberdeen & Rockfish R.R. Co.* v. *SCRAP*, 422 U.S. 289, 320 (1975) ("*SCRAP II*"); *Kleppe* v. *Sierra Club*, 427 U.S. 390, 401-402 & nn.12-13 (1976); *Weinberger* v. *Catholic Action of Hawaii*, ___ U.S. ___, 102 S. Ct. 197, 203 (1981). For example, in *SCRAP II* this Court held that an EIS is not required until an agency "makes a recommendation or report on a *proposal* for federal action." 422 U.S. at 320 (emphasis in original). In the absence of a proposed action, an agency's responsibility under Section 102(2)(C) of NEPA is nil.

The position of the Court of Appeals, if not disaffirmed by this Court, is likely to be cited in innumerable proceedings before federal agencies and the courts. Therefore, we urge that this Court make clear that, in the absence of a proposal for action by the agency, Section 102(2)(C) of NEPA does not impose any obligation upon a federal agency.

addition, the cases recognize the inherent difficulties in attempting to measure and incorporate into an environmental analysis the widely varying psychological states of potentially affected persons. These decisions have held that to require federal agencies to predict psychological impacts which might be caused by a proposed federal action would mandate an unreasonable and meaningless inquiry. This violates the rule of reason under NEPA established in *Natural Resources Defense Council* v. *Morton*, 458 F.2d 827, 834, 837 (D.C. Cir. 1972) and endorsed by this Court in *New York* v. *Kleppe*, 429 U.S. 1307, 1311 & n.1 (1976).

The majority opinion never confronts the difficulty which will be faced by federal agencies in attempting to predict the psychological reactions of a heterogeneous population to a future event. There is a world of difference between conducting a *post-hoc* analysis of the psychological impacts of a previous action and predicting the psychological impacts which may occur in the future if an action were taken. However, the majority opinion ignores this crucial distinction in discussing whether predictions of psychological impacts are sufficiently quantifiable. 678 F.2d at 228-229. Indeed, the majority opinion misstates the finding of the Atomic Safety and Licensing Board on this subject. The Board could not identify a source of evidence which would permit the measurement of the psychological stress phenomenon well enough for use in a full-scale cost/benefit balancing in an environmental impact statement. *In the Matter of Metropolitan Edison Company*, 11 NRC 297, 305 (1980). Furthermore, the Court of Appeals identified no authority showing that such predictions would be meaningful.

Essentially, the predictions required by the Court of Appeals' decision would be little more than a popularity

poll. NEPA should not be construed to require this result. With respect to this case, the use of nuclear power to further national energy goals is a policy decision which, as this Court has acknowledged, Congress has already made. *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council*, 435 U.S. 519, 557-558 (1978).

If not reversed, the majority opinion will have a far-reaching impact, since, as Judge Wilkey points out, if NEPA embraces fears and anxieties in one case, it must in all. 678 F.2d at 241. Indeed, since virtually all federal agencies must comply with NEPA, allegations involving psychological health impacts would have to be addressed throughout the federal government. Even if the majority opinion is construed narrowly, considerable litigation is likely on whether particular allegations of fear anxiety and distress would be cognizable under NEPA. In all of these cases, agencies, parties and the courts will be compelled to focus upon the public's fears and anxieties concerning the environmental risks associated with the proposed federal actions, not the risks themselves. This would be an unnecessary and extravagant exercise, for nothing in NEPA even suggests a departure from the holdings of prior decisions that psychological health impacts are not cognizable under the statute.

ARGUMENT

The Court Of Appeals' Decision With Respect To Psychological Health Violates The Rule Of Reason Consistently Applied To NEPA And Is Inconsistent With Prevailing Judicial Decisions.

Ever since the landmark decision in *Natural Resources Defense Council* v. *Morton*, 458 F.2d 827, 834, 837 (D.C. Cir. 1972), courts have consistently applied a rule of reason in construing a federal agency's responsibilities under Section 102(2)(C) of NEPA. *New York* v. *Kleppe*,

429 U.S. 1307, 1311 & n.1 (1976). *NRDC* v. *Morton* explained the rationale for this approach, stating:

> The statute [NEPA] must be construed in the light of reason if it is not to demand what is, fairly speaking, not meaningfully possible, given the obvious that the resources of energy and research—and time—available to meet the Nation's needs are not infinite.

458 F.2d at 837.

The prevailing view of the courts has been that NEPA does not require federal agencies to predict the psychological impacts that might result from a proposed action.[5] Judge Wilkey's dissent correctly acknowledges two important bases for these holdings:

> They are based largely on the fact that psychological concerns are simply too far removed from the purpose of NEPA, which is to ensure that an agency considers the environmental effects of a decision, not the reactions of affected individuals to the risk of those environmental effects. They also rest on the inherent difficulties in attempting to measure and incorporate into the environmental analysis the differing psychological states of the affected persons.

678 F.2d at 240.

These cases essentially have found that to require agencies to predict psychological impacts which might be caused by a proposed action would mandate an unreasonable and meaningless inquiry. This violates the rule of reason. In *Hanly* v. *Kleindienst*, 471 F.2d 823, 833 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973), for example,

---

[5] Relevant decisions which have addressed this issue are discussed by Utility Petitioners (Utility Pet. at 11-14 & n.13) and in Judge Wilkey's dissent (678 F.2d at 239-240 & nn.19-21).

the court expressed doubt that psychological impacts on neighbors of a proposed jail were required to be considered under NEPA "since they do not lend themselves to measurement." The court identified a fundamental distinction between environmental impacts that are susceptible to some form of measurement and psychological factors:

> Unlike factors such as noise, which can be related to decibels and units which measure duration, or crime, in which crime statistics are available, psychological factors are not readily translatable into concrete measuring rods.

Id. at 833 n.10. Judge Leventhal quoted this language with approval in *Maryland-National Capital Park & Planning Comm'n* v. *United States Postal Service*, 487 F.2d 1029, 1038 (D.C. Cir. 1973) and, as Judge Wilkey's dissent notes, subsequently observed that:

> although measurement difficulties do not necessarily prevent consideration under NEPA, they do 'have a bearing on the intention of Congress, and whether it contemplated . . . a requirement of a detailed [EIS].'

678 F.2d at 240.

Although these cases require agencies to discuss the impact of a proposed action on the crime rate, which can be quantified, the same cases hold that NEPA does not require agencies to predict the psychological impact of *fears* about crime. *Hanly*, *supra*, 471 F.2d at 833 & n.10; *Nucleus of Chicago Homeowners Ass'n* v. *Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976); *Como-Falco Coalition* v. *Dep't of Labor*, 465 F. Supp. 850, 861-862 (D. Minn. 1978), *aff'd*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); *Trinity Episcopal School Corp.* v. *Romney*, 387 F.Supp. 1044, 1078-1079 (S.D.N.Y. 1974), *rev'd and remanded in part*

on other grounds, 523 F.2d 88 (2d Cir. 1975). The holdings of these cases are clear and uniform. NEPA does not require agencies to predict the level and impact of fears and anxieties *per se*.

The majority opinion's attempt to distinguish these cases by characterizing them as involving "socioeconomic anxieties" (678 F.2d at 229) is unpersuasive. These cases specifically refer to psychological effects, fears and sensibilities. The majority opinion frames this case in the same terms of fear and anxiety when it states that NEPA applies to "post-traumatic *anxieties*, accompanied by physical effects and caused by *fears* of recurring catastrophe." 678 F.2d at 230 (emphasis added). However, the majority fails to articulate any controlling distinction for purposes of NEPA between these other cases and the present case. A fear of personal harm triggered by a personal assault or other traumatic event should be indistinguishable from the type of psychological health impact alleged to arise under the facts of this case. We agree with Judge Wilkey. "*In each case . . . what we are dealing with are fears and anxieties; if NEPA embraces fears and anxieties in one, it must in all.*" 678 F.2d at 241 (emphasis in original).

The majority's attempt to limit the scope of its holding is equally unpersuasive. On the one hand, with respect to the applicability of NEPA to psychological health impacts, the majority appears to establish a three-part test which requires post-traumatic anxieties, physical effects and fears of recurring catastrophe. 678 F.2d at 230. On the other hand, it departs from this test when it states that NEPA applies to "medically diagnosed effects of traumatic accidents on the human mind." *Id.* at 230 n.10. The reference to trauma is the only common factor in these formulations. We agree with Judge Wilkey, how-

ever, that a prior traumatic event is not a valid criterion for determining the applicability of NEPA. 678 F.2d at 243. Serious psychological impacts surely can occur without the stimulus of a traumatic event. *Id.*

Essentially, the holding is this case appears to be distinguished from earlier cases only by the majority's concerns about nuclear power and its subjective determination as to which fears and anxieties are "worthy" of consideration under NEPA. 678 F.2d at 241-243 & n.36 (Wilkey, J., dissenting.) Such an approach is clearly erroneous. In interpreting an agency's obligations under NEPA, the Court of Appeals may not impose its views on the desirability of any specific federal policy.

Moreover, the majority opinion never confronts the difficulty of federal agencies complying with the obligation it imposes. Nor does the majority fully acknowledge the distinction between analyzing the impact of the accident at TMI-2 on a *retrospective* basis and *predicting* the impact of the restart of TMI-1. While the majority opinion seems to focus on the importance of analyzing the psychological impact of the TMI-2 accident (678 F.2d at 227, 228, 230), it imposes upon the NRC a far different and more difficult obligation—that of predicting the psychological reaction of a heterogeneous population to a future event. There is a substantial difference between conducting an after-the-fact analysis of the psychological health impacts of a prior action and attempting to predict the psychological health impacts which might occur in the future if a certain action were taken. The majority opinion cites no scientific basis or authority for saying such predictions could be made in a meaningful way, and we are aware of none.

The majority opinion obliterates this crucial distinction in discussing whether predictions of psychological factors

are sufficiently quantifiable. 678 F.2d at 228-229. Its attribution to the Atomic Safety and Licensing Board of an assertion that "psychological factors were sufficiently quantifiable to be considered" simply ignores the context of that statement, which refers to retrospective studies of impacts resulting from the TMI-2 accident. *Id.* at 229. With respect to future psychological health predictions the Board in fact found otherwise:

> We have examined the filings of the parties, the studies referred to by the staff, and other literature. *We cannot identify a source of evidence which would permit the measurement of the psychological stress phenomenon well enough for use in a full-scale cost/benefit balancing in an EIS.* Nor do we know whether or not the state of the art can now produce such evidence.

In the Matter of Metropolitan Edison Company, 11 NRC 297, 305 (1980) (footnote omitted) (emphasis added).

EEI submits that the prospective measurement of the psychological impacts of a proposed action is inherently subjective and not meaningful for the following reasons. The manner in which individuals perceive events and surroundings is due in large part to the forces which shaped their individual psychological make-up from early childhood, as well as to daily events, such as problems at home or work. Even if individuals predict what their reactions to a future event would be, their actual reactions to that event could be far different from that which they anticipated. Predictions of individual reactions to a future action are also likely to be influenced by many outside factors. The actions of federal agencies and other interested parties could be significant in this regard. The very fact of a federal agency conducting a thorough inquiry into the psychological health impacts of an action on a

population could heighten the stress levels in that population. Groups opposed to proposed actions would have little incentive to focus public debate on facts concerning the safety of the proposal and substantial incentive to stir up public fears and emotions. Political controversy and media attention could also influence public reaction. Distinguishing between predicted impacts caused by the proposal itself and the impacts caused by these other factors would be virtually impossible.

Under these circumstances, any prediction of future psychological impacts of a proposed action is likely to be little more than a poll of the relative degrees of approval of and antagonism towards the action. In this particular case, NEPA should not be construed to require the NRC to sponsor such a popularity poll on the use of nuclear power. This is a policy decision properly within the domain of the Congress, and Congress has made the decision to use nuclear power to help satisfy our nation's energy needs. *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council*, 435 U.S. 519, 557-558 (1978). Nor should NEPA be construed to require a poll of the public's confidence in the ability and reliability of an agency's regulatory role, such as the NRC in this case. Any concerns about the impacts of proposed actions should be addressed directly under NEPA through an analysis of the factors which cause those concerns, rather than indirectly through an analysis of the public's perceptions. Such perceptions are extremely subjective and impossible to distinguish from the anxieties arising from the "social opinions, economic concerns, or political disagreements" which the majority opinion recognizes are not cognizable under NEPA. 678 F.2d at 230.

The majority opinion would have a far reaching impact if it is not reversed. Judge Wilkey predicts this is a

necessary result, reasoning, *"if NEPA embraces fears and anxieties in one [case], it must in all."* 678 F.2d at 241 (emphasis in original). Since NEPA applies to virtually all federal agencies, considerations of psychological health issues would have to be addressed throughout the federal government and would be subject to challenge.[6] *Id.* at 239 n.17.

Even under the most narrow reading of the majority opinion, constant litigation is likely as to whether specific allegations of fear, anxiety or distress are based upon sociological or economic factors which would not be cognizable (678 F.2d at 229), or involve severe and medically diagnosable effects (*id.* at 230 & n.10).[7] Even a narrow construction requiring a prior traumatic event could still affect a broad range of activities. A traumatic event could be caused, for instance, by criminal acts, natural phenomena or disasters involving airports, highways, dams, mines, liquefied natural gas facilities, transportation of hazardous materials, storage of hazardous wastes, missile sites, submarine bases and other defense facilities. Opponents of such activities could rely upon the majority opinion to seek to obtain under NEPA an analysis of the psychological health impacts of federal actions involving

---

[6] Psychological health claims have been introduced in at least seven proceedings before the NRC. Utility Pet. at 9 n.11.

[7] On July 16, 1982, the NRC issued a policy statement on the treatment of psychological stress claims in proceedings other than TMI-1. 47 *Fed. Reg.* 31762 (1982). This statement interprets the majority opinion narrowly and effectively precludes consideration of psychological stress claims in all other proceedings. We agree with the reasoning of the Government Petition (at 27-28 n.22) that, despite this policy statement, the issue of the cognizability of psychological stress contentions in other proceedings is likely to be litigated in the Courts of Appeals.

such activities. Many such proposals are likely to be involved in lengthy litigation questioning whether the alleged psychological impacts satisfy the majority's criteria for cognizability under NEPA.

In all of these cases, parties, agencies and the courts will be focusing upon the public's fears and anxieties stemming from their perceptions of the risks associated with the proposed actions rather than with the risks themselves. We submit that this is poor public policy and that nothing in NEPA even suggests, much less requires, a departure from the holdings of the earlier cases that psychological impacts are not cognizable under NEPA.

CONCLUSION

For the foregoing reasons, *amicus curiae* Edison Electric Institute respectfully urges that the petitions for a writ of certiorari be granted.

Respectfully submitted,

ROBERT L. BAUM
Counsel of Record
PETER B. KELSEY
EDWARD H. COMER
WILLIAM L. FANG
EDISON ELECTRIC INSTITUTE
1111 19th Street, N.W.
Washington, D.C. 20036
(202) 828-7679

September 30, 1982

Office - Supreme Court, U.S.
FILED
SEP 30 1982
ALEXANDER L. STEVAS,
CLERK

Nos. 81-2399 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, NEW JERSEY CENTRAL POWER AND LIGHT COMPANY, PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents,

and

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Petitions for a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF OF THE NATIONAL ASSOCIATION OF MANUFACTURERS AS AMICUS CURIAE IN SUPPORT OF PETITIONERS

WILLIAM E. BLASIER
General Counsel
JAN S. AMUNDSON
Deputy General Counsel
Counsel of Record
NATIONAL ASSOCIATION OF MANUFACTURERS
1776 F Street, N.W.
Washington, D.C. 20006
(202) 626-3860
Attorneys for Amicus Curiae

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

TABLE OF CONTENTS

	Page
Interest of Amicus Curiae	2
Summary of the Case	2
Summary of the Argument	3
The Argument:	
I. The Decision of the Court of Appeals is an Unwarranted Extension of Its Review Authority	4
II. The Decision of the Court of Appeals Conflicts with Other Court Decisions	7
Conclusion	10

TABLE OF AUTHORITIES

Cases:	Page
Breckinridge v. Rumsfeld, 537 F.2d 864 (6th Cir. 1976), *cert. denied*, 429 U.S. 1061 (1977)	7
First National Bank of Chicago v. Richardson, 484 F.2d 1369 (7th Cir. 1973)	9
Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973)	7
Kleppe v. Sierra Club, 427 U.S. 390 (1976)	4
Maryland-National Capital Park and Planning Commission v. United States Postal Service, 487 F.2d 1029 (D.C. Cir. 1973)	8
Nucleus of Chicago Homeowners Association v. Lynn, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976)	7
People Against Nuclear Energy v. United States Nuclear Regulatory Commission, 678 F.2d 222 (D.C. Cir. 1982)	6, 8
Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980)	5
Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978)	3, 5-6

Statutes:	
Atomic Energy Act of 1954, 42 U.S.C. § 2011 *et seq.*	4
National Environmental Policy Act of 1969, 42 U.S.C. § 4321 *et seq.*	2, 4
Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 *et seq.*	5

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

Nos. 81-2399
82-358

METROPOLITAN EDISON COMPANY, *et al.*,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents,

and

UNITED STATES NUCLEAR REGULATORY COMMISSION
and the UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Petitions for a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF OF THE NATIONAL ASSOCIATION OF MANUFACTURERS AS AMICUS CURIAE IN SUPPORT OF PETITIONERS

INTEREST OF AMICUS CURIAE

With consent of all the parties, the National Association of Manufacturers (NAM) files this brief in support of the Petitioners. The NAM is a non-profit voluntary business association incorporated under the laws of the State of New York. NAM has a membership of approximately 11,000 manufacturing and related business concerns which represents an estimated 80 percent of all goods manufactured in the United States. Most of NAM members are involved in developing and maintaining America's industrial and energy base. As such, the NAM membership is continually regulated by various government agencies including the Nuclear Regulatory Commission (NRC). Additionally, any agencies whose activities require compliance with the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321 *et seq.*, will have an effect on NAM members. We feel if this decision is not addressed by this Court there is a great potential for mischief in all areas of the government that deal with NEPA mandates. Although the Court of Appeals for the District of Columbia Circuit endeavored to put limits on the effect of this decision, the potential breadth of other applications by other government agencies or departments of this decision could have widespread effects and, as such, have a profound impact on the membership of NAM. Offering this broad base of representation, we believe we present this Court a perspective beyond that represented by the Petitioners.

SUMMARY OF THE CASE

In March of 1979 there was an accident at the Three Mile Island Nuclear Station Unit 2 (TMI 2). At that time, Three Mile Island Unit 1 (TMI 1) was shut down for ordinary maintenance and refueling. The NRC then ordered TMI 1 to be shut down indefinitely pending a hearing to determine safety-related issues at the plant. At the same time the Commission stated that it did not know whether psychological stress would be regarded as

legally relevant to any determination relating to the restarting of Unit 1. Petitioners, People Against Nuclear Energy (PANE), attempted to intervene in the hearing on the restart of TMI 1 alleging that the TMI 2 accident had caused severe trauma and stress and that the reopening of TMI 1 would aggravate and perpetuate this stress. The NRC ultimately excluded PANE's contentions from the hearing. PANE thereafter filed suit and on May 14, 1982, an amended final judgment was rendered by the United States Court of Appeals for the District of Columbia Circuit. The decision requires the NRC to determine if there is sufficient new information regarding psychological health since the license for TMI 1 was issued. If there is such information, the NRC must then prepare a supplemental environmental impact statement which would include a comprehensive evaluation of the psychological health effects relating to the restart of TMI 1.[1]

SUMMARY OF THE ARGUMENT

This decision deviates from other precedents in that the court of appeals makes an unwarranted extension of NEPA. This will ultimately impact other federal agencies that must implement NEPA requirements. This result is inconsistent with the decision of this Court in *Vermont Yankee Nuclear Power Corporation v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978), which defines the role of a court in reviewing agency actions.

Further, this decision allows consideration of factors under NEPA which have no causal relationship to the human environment. In this instance, the question concerns psychological stress or fear which will be aggra-

[1] The decision of the court also involved a finding of "continuing agency responsibility" which would require the NRC to update environmental impact statements. This issue, although involved in the decision regarding psychological stress, is not being raised in either Petition for Writ of Certiorari.

vated by the operation of a nuclear power plant. The fear is not associated with the safety of the power plant but rather exists due to a prior accident at a different unit. Aggravated fear or stress without some nexus to the environment is not contemplated by NEPA. These erroneous conclusions by the Court of Appeals for the District of Columbia Circuit merit consideration by the Supreme Court.

THE ARGUMENT

I. The Decision of the Court of Appeals is an Unwarranted Extension of Its Review Authority

In 1954 the United States Congress made a decision to facilitate development of our nuclear energy capabilities by enacting the Atomic Energy Act of 1954, 42 U.S.C. § 2011 *et seq.* This reflected a deliberate congressional decision to establish a national policy goal relative to the future energy needs of our nation. Recognizing the need of man to live in harmony with and preserve the integrity of our environment, the Congress subsequently passed the National Environmental Policy Act of 1969, 42 U.S.C. § 4321 *et seq.* One of the principal aims of the passage of NEPA was to assure that environmental concerns were addressed in a manner consistent with other national policies. Striking the proper balance between outwardly conflicting national policy concerns is frequently difficult when dealing with environmental impacts, but this Court has previously stated:

> NEPA announced a national policy of environmental protection and placed a responsibility upon the Federal Government to further specific environmental goals by "all practicable means, consistent with other essential considerations of national policy." NEPA § 101(b), 42 USC § 4331(b) [42 USCS § 4331(b)]. *Kleppe v. Sierra Club*, 427 U.S. 390, 409 (1976).

Far from attempting to preserve the balance struck by the NRC, the court below seems to have substituted its

own judgment about the development of nuclear energy for that of Congress and the NRC. As such, the decision below does little more than encourage the use of NEPA as a barrier to implementation of other national policy objectives. Nor can this potential be viewed only in the context of NRC related activities. For example, in 1976 Congress passed the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 *et seq.* which concerns the siting of hazardous waste disposal sites. The potential that this activity will engender similar reactions to the siting and operation of a nuclear energy plant cannot be overestimated. NEPA was intended to promote accommodation of environmental concerns to the extent possible, rather than to delay or prevent the implementation of other congressionally established national policies, by those who are philosophically opposed to those policies.

This Court has previously enunciated the role of the judiciary in reviewing agency activities under NEPA. Most recently this Court stated:

> On the contrary, once an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to insure that the agency has considered the environmental consequences; it cannot " 'interject itself within the area of discretion of the executive as to the choice of the action to be taken.' " *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227-28 (1980) (per curiam).

This Court also looked at the role of the judiciary in reviewing agency procedures pursuant to congressional direction.

> Even apart from the Administrative Procedure Act this Court has for more than four decades emphasized that the formulation of procedures was basically to be left within the discretion of the agencies to which Congress had confided the responsibility for substantive judgments. *Vermont Yankee Nuclear*

> *Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 524 (1978).

Similarly in *Vermont Yankee*, this Court limited the judiciary from improperly imposing its preference beyond the purview of a court's authority. This Court stated:

> It is in the light of this background of statutory and decisional law that we granted certiorari to review two judgments of the Court of Appeals for the District of Columbia Circuit because of our concern that they had seriously misread or misapplied this statutory and decisional law cautioning reviewing courts against engrafting their own motions of proper procedures upon agencies entrusted with substantive functions by Congress. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 525 (1978).

Thus, this Court has recognized that the role of the judiciary must remain impartial to public policy interpretation such as the policy encouraging the development of nuclear energy. The NRC exercised agency discretion in its determination of what it was required to do. However, the court's decision would require the agency to consider additional factors, previously not interpreted as activating NEPA obligations. While endeavoring to focus its attention on the specific factual situations presented, the court ignores other precedents simply because they do not have the "holocaust potential of an errant nuclear reaction." *People Against Nuclear Energy v. United States Nuclear Regulatory Commission*, 678 F.2d 222, 229 (D.C. Cir. 1982).[2] Clearly, the court below expanded its role beyond that of merely reviewing the sufficiency of the agency's procedural activities and has instead imposed its own preferences. As such, this decision represents a new precedent inviting similar efforts by those who seek to postpone or indefinitely delay implementation of controversial federal statutes.

---

[2] The opinions of the Court of Appeals is also printed as Appendix A in the Petition filed by Metropolitan Edison Co., *et. al.*

II. The Decision of the Court of Appeals Conflicts with Other Court Decisions

The concept of psychological stress and its relationship to the environment has been considered by various courts of appeals. To date, none of these courts have been persuaded that psychological stress represents a primary impact on the environment. The Sixth Circuit determined "Although factors other than the physical environment have been considered, this has been done only when there existed a primary impact on the physical environment." *Breckinridge v. Rumsfield*, 537 F.2d 864, 866 (6th Cir. 1976), *cert. denied*, 429 U.S. 1061 (1977).

The Second Circuit looked at psychological and socio-economic consequences and held:

> For the most part opposition is based upon a psychological distaste for having a jail located so close to residential apartments. . . . It is doubtful whether psychological or sociological effects upon neighbors constitute the type of factors that may be considered in making such a determination since they do not lend themselves to measurement. *Hanly v. Kleindienst*, 471 F.2d 823, 833 (2nd Cir. 1972), *cert. denied*, 412 U.S. 908 (1973).

Similarly, in *Nucleus of Chicago Homeowners Association v. Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976), the court had to consider the question of whether low income housing constituted an impact recognizable under NEPA. In so doing it stated:

> To the extent that this claim can be construed to mean HUD must consider the fears of the neighbors of prospective public housing tenants, we seriously question whether such an impact is cognizable under NEPA.

Indeed, the Court of Appeals for the D.C. Circuit itself has previously questioned the relationship of NEPA to

stress or fear-related factors with low-income workers being located in a suburban setting. Thus, in *Maryland-National Park and Planning Commission v. United States Postal Service*, 487 F.2d 1029, 1037 (D.C. Cir. 1973), the D.C. Court stated:

> Concerned persons might fashion a claim, supported by linguistics and etymology that there is an impact from people pollution on "environment," if the term be stretched to its maximum. We think this type of effect cannot fairly be projected as having been within the contemplation of Congress.

The court below now seems to take an inconsistent approach to this issue predicated on the fact this case involves a nuclear energy plant and is more threatening, in its view, than any other factual situation presented to other courts. However, stress considerations must be accorded the same attention whether they relate to the proximity of prisons or nuclear energy plants. In the dissenting opinion, Judge Wilkey recognizes that fear associated with the operation of a nuclear plant cannot be distinguished from other situations and states:

> *In each case, however, what we are dealing with are fears and anxieties; if NEPA embraces fears and anxieties in one, it must in all. PANE v. United States Nuclear Regulatory Commission*, 678 F.2d at 241 (Wilkey, dissenting) (emphasis in original).

In this case, the allegation is that the fear of the restart of TMI 1 would aggravate existing fear and anxiety. There may always be fear associated with the proliferation of the use of nuclear energy. However, allowing the aggravation of existing fear, without related environmental consequences, to require further assessments or impact statements is an unwarranted extension of NEPA.

This situation was also considered in footnote 13 of *First National Bank of Chicago v. Richardson*, 484 F.2d 1369 (7th Cir. 1973), where the court states:

> "[i]t is doubtful whether psychological and sociological effects upon neighborhoods constitutes the type of factors that may be considered in making such a determination since they do not lend themselves to measurement." 471 F.2d at 833. As regards public "sensibilities" aroused by criminal defendants, we question whether such factors, even if amenable to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized.

Apart from argument that court precedent will not support the court's determination, there also is a lack of causal connection between the alleged stress and the activity at TMI 1. Respondents allege that there is existing fear due to the accident at TMI 2 and renewed operation of TMI 1 would aggravate this existing fear. Fear and stress are speculative and perceptual considerations and it would put an unreasonable burden on any agency with NEPA obligations to require detailed impact statements dealing with perceptual problems particularly when they are not even directly related to the operations under consideration. Without an appropriate nexus, the opportunities for raising objections stemming from unrelated environmental considerations would be virtually limitless. It is a chimera to expect agencies to anticipate any residual reaction to environment actions, particularly reactions that have no immediate relationship to the environment and reactions that are perceptual and individualistic. To achieve the aims of NEPA, agencies must be able to have reasonable parameters within which they make their determinations. In this case, this nexus is absent. Aggravated fear is too remote and speculative to require further NEPA inquiry. The determination of the court is an unwarranted extension of the Act.

CONCLUSION

In summary, this case represents two departures from precedent and legislative mandate by the court of appeals. In the first instance, the court is not following a prescribed interpretive role, but is imposing its own determinations of the congressional purpose of NEPA. This is not in keeping with precedents of this Court and could have broad reaching effects on any other case which would involve the application of NEPA.

Secondly, the court's interpretation of the focus of psychological stress is inappropriate to the purpose of NEPA. At the very least, health effects must bear a causal relationship to the environment to be given the application suggested by the court of appeals.

For these reasons, the Petitions for the Writ of Certiorari should be granted.

Respectfully submitted,

WILLIAM E. BLASIER
General Counsel

JAN S. AMUNDSON
Deputy General Counsel

Attorneys for Amicus Curiae

Office - Supreme Court, U.S.
FILED
OCT 1 1982
ALEXANDER L. STEVAS,
CLERK

Nos. 82-358
81-2399

In the Supreme Court of the United States

October Term, 1982

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,
Petitioners,

vs.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

METROPOLITAN EDISON CO., et al.,
Petitioners,

vs.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

BRIEF AMICUS CURIAE IN SUPPORT OF THE PETITIONS OF THE UNITED STATES NUCLEAR REGULATORY COMMISSION, THE UNITED STATES OF AMERICA AND THE METROPOLITAN EDISON CO., ET AL., FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT, FILED ON BEHALF OF THE NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

(Counsel on Inside Cover)

R. L. Mimeographing, Inc., 926 Cherry Street, Kansas City, Mo. 64106, (816) 421-5050

G. WILLIAM FRICK
C. DAVID BARRIER*
STEPHEN W. JACOBSON
LATHROP, KOONTZ, RIGHTER, CLAGETT,
& NORQUIST

1140 Connecticut Avenue, N.W.
Washington, D.C. 20036
Attorneys for Amicus Curiae

Of Counsel:
GARY B. RANDALL
Regulatory Counsel
National Rural Electric
Cooperative Association

---

*Counsel of Record

TABLE OF CONTENTS

Opinions Below 2

Jurisdiction 2

Interest of Amicus Curiae 2

Argument 4

I. Congress Intended the Environmental Impact Statement to Be a Discrete Limited Tool for Analysis of Physical Impacts on the Environment Which Result From Federal Actions 6

II. The Court of Appeals' Decision Will Have a Significant Adverse Impact on NEPA by Injecting Political and Policy Considerations Into the EIS Process 11

Conclusion 16

TABLE OF AUTHORITIES

Cases

Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) 10

Image of Greater San Antonio v. Brown, 570 F.2d 517 (5th Cir. 1978) 7, 12

Kleppe v. Sierra Club, 427 U.S. 390 (1976) 13, 15

Maryland-National Capital Park and Planning Commission v. U.S. Postal Service, 487 F.2d 1029 (D.C. Cir. 1973) 10

National Association of Government Employees v. Rumsfeld, 413 F. Supp. 1224 (D.D.C. 1976), *aff'd mem. sub nom. National Association of Government Employees v. Brown*, 556 F.2d 76 (D.C. Cir. 1977) 7, 12

NRDC v. Morton, 458 F.2d 827 (D.C. Cir. 1972) 12
Stryker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980) 12
Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, 435 U.S. 519 (1978) 5, 9, 12

Statutes

National Environmental Policy Act, 42 U.S.C. 4321 et seq.

Section 2, 42 U.S.C. 4321 6
Section 102(2), 42 U.S.C. 4332(2) 6

Miscellaneous

115 *Cong. Rec.* 40416 (1969) (statement of Senator Jackson) 7
115 *Cong. Rec.* S1784 (Daily ed., February 18, 1969) 8
S. Rep. No. 91-296, 91st Cong., 1st Sess. 4 (1969) 8
Report of the President's Commission on the Accident at Three-Mile Island, The Need for Change: The Legacy of TMI (Oct. 1979) 11

Nos. 82-358
81-2399

In the Supreme Court of the United States

October Term, 1982

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,
Petitioners,

vs.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

METROPOLITAN EDISON CO., et al.,
Petitioners,

vs.

PEOPLE AGAINST NUCLEAR ENERGY, et al.,
Respondents.

BRIEF AMICUS CURIAE IN SUPPORT OF THE PETITIONS OF THE UNITED STATES NUCLEAR REGULATORY COMMISSION, THE UNITED STATES OF AMERICA AND THE METROPOLITAN EDISON CO., ET AL., FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT, FILED ON BEHALF OF THE NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

OPINIONS BELOW

The opinion of the Court of Appeals is reported at 678 F.2d 222. The Orders of the Nuclear Regulatory Commission reviewed by the Court of Appeals and ancillary opinions are reported at 12 N.R.C. 607 and 14 N.R.C. 593, respectively.

JURISDICTION

The amended judgment of the Court of Appeals was entered without supporting opinions on April 2, 1982, Judge Wilkey dissenting. A modified version of the amended judgment with opinions was entered on May 14, 1982. On June 23, 1982, the Chief Justice extended the time for filing a petition for a writ of certiorari to and including August 20, 1982. The Chief Justice further extended the time for filing such a petition to and including August 30, 1982. Respondents sought and were granted an extension of time for filing in opposition until September 30, 1982, by the Clerk of the Court in Case No. 81-2399, a connected case to No. 82-358. Jurisdiction is invoked under 28 U.S.C. §1254(1).

INTEREST OF AMICUS CURIAE

The National Rural Electric Cooperative Association ("NRECA") is a non-profit national service organization for some 1000 rural electric cooperatives, which provide central station electricity to nearly 25 million consumers in 46 states. Rural electric cooperatives distribute roughly 11% of the nation's electricity and serve ten percent of the population. As cooperatives, owned by the consumers of

their electricity, NRECA members seek to provide a reliable source of energy at the lowest possible cost. NRECA supports the position of petitioners, Nuclear Regulatory Commission and the United States of America in case no. 82-358, and the petitioners, Metropolitan Edison Co., *et al.*, in case no. 81-2399 currently before the Court.

The future construction by NRECA's members of generating units and associated facilities, which often involves preparation of environmental impact statements, will be adversely affected by the decision of the court below. NRECA members generate electricity from a variety of facilities, including fossil fuel-fired steam generating units, nuclear units and hydroelectric facilities. NRECA members also distribute electricity generated by other utilities. NRECA members have financial interests in additional generating capacity which is currently planned or under construction, including several thousand megawatts of nuclear capacity.

The Court of Appeals' decision, by designating psychological well-being and similar intangible conditions as "environmental effects," significantly expands the procedural requirements under NEPA applicable to these facilities, thereby directly affecting NRECA's members and their consumer-owners. Delay in the development and construction of nuclear and other power plants, which the Court of Appeals' decision assures, is of major concern to the membership.

Furthermore, for NRECA members to plan effectively for the delivery of electrical services in the future, they must be able to gauge adequately which type generating plants can be built and safely operated without interruption. The Court of Appeals' decision, however, has created a state of uncertainty with regard to the long-term via-

bility of nuclear power. Therefore, the questions presented require clear, deliberate and prompt resolution.

NRECA has obtained written consent of all parties below to the filing of this brief pursuant to Rule 36.1 of the Rules of this Court.

ARGUMENT

This case presents to the Court a crucial issue regarding the future of the National Environmental Policy Act ("NEPA")—whether there are *any limits* to the issues which federal agencies must examine in environmental impact statements ("EIS"). In characterizing "psychological stress" as an "environmental effect," the Court of Appeals has usurped the role of Congress and converted an EIS to a forum for airing the diverse emotional and political responses which accompany most major federal acions.

The Court of Appeals' decision requires the Nuclear Regulatory Commission to prepare a supplemental EIS addressing psychological stress if the Commission determines that significant new circumstances regarding the mental health of individuals living near the Three Mile Island Unit No. 1 nuclear reactor have arisen since preparation of the original EIS on the facility. This unprecedented expansion of NEPA's obligations is based on interpretations of NEPA by the Court of Appeals which will lead to a severe distortion of the EIS process: (1) an EIS will have to determine individual mental and emotional responses to every major federal action, not just the direct physical effects to the environment which may occur as a result of that action, and (2) the EIS will become a policy document discussing political reactions to major federal actions.

The Court of Appeals has given a signal to opponents of major federal actions to raise objections at a new level of sophistication and complexity, serving only to hamstring decisionmakers on nuclear power as well as other major federal actions. The litigation and delays which will unquestionably result from the Court of Appeals' decision can be averted only by this Court promptly curtailing the broad policy holding of the court below and reinstating the EIS to its limited role - examining direct physical environmental effects.

The Court of Appeals' novel interpretation of NEPA deserves no less scrutiny than this Court gave to *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519 (1978), an earlier attempt by the same Court of Appeals to restructure the requirements imposed upon the Nuclear Regulatory Commission pursuant to NEPA and the Administrative Procedure Act. This Court's summation of the lower court's decision in *Vermont Yankee, supra*, 435 U.S. at 550 is as apt here:

> While the court's rationale is not entirely unappealing as an abstract proposition, as applied to this case we think it basically misconceives not only the scope of the agency's statutory responsibility, but also the nature of the administrative process, the thrust of the agency's decision, and the type of issues the intervenors were trying to raise.

The Court of Appeals has misconceived the proper role and scope of the EIS under NEPA, and that misconception creates a procedural quagmire which will vitiate the EIS process and negate the important, but limited, objectives of an EIS.

I. Congress Intended the Environmental Impact Statement to Be a Discrete Limited Tool for Analysis of Physical Impacts on the Environment Which Result From Federal Actions.

The enactment of NEPA in 1969 reflected congressional recognition that federal actions which can change the environment must be more carefully assessed. NEPA was thus designed "to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." 42 U.S.C. §4321 (1976). In furtherance of that goal, Congress required that federal agencies contemplating a major federal action which significantly affects the environment carefully examine those environmental effects through an EIS. Section 102 of NEPA 42 U.S.C. §4332 (1976),thus provides in pertinent part:

> (2) [A]ll agencies of the Federal government shall -
>
> * * *
>
> (c) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on -
>
> (i) the environmental impact of the proposed action,
>
> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
>
> (iii) alternatives to the proposed action,
>
> (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

> (v) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

The focus of the EIS is man's *physical environment* and the effects of federal decisions on that environment.

> What is involved is a congressional declaration that we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the health of mankind: that we will not intentionally initiate actions which will do irreparable damage to the air, land, and water which support life on earth.
>
> * * *
>
> The basic principle of the policy is that we must strive in all we do to achieve a standard of excellence in man's relationship to his physical surroundings.

115 *Cong. Rec.* 40416 (1969) (statement of Senator Jackson). Numerous courts have confirmed that the subject of the EIS is physical effects. *See, e.g., Image of Greater San Antonio v. Brown*, 570 F.2d 517, 522 (5th Cir. 1978); *National Association of Government Employees v. Rumsfeld*, 413 F. Supp. 1224, 1229-30 (D.D.C. 1976), *aff'd mem. sub nom. National Association of Government Employees v. Brown*, 556 F.2d 76 (D.C. Cir. 1977).

The EIS has a specific role: to identify the physical environmental effects of a proposed action and possible alternatives to the action. Having considered such information, the responsible federal official can then make his decision, exercising value judgments and policy considerations consistent with his statutory mandate. NEPA in no way requires the EIS to be the vehicle to identify, analyze or balance the policy determinations made by Congress and

federal officials. The EIS, while comprehensive, is not without limits.

Limitation of the EIS to physical effects on the environment does not mean that Congress failed to recognize the relationship of the environment to human emotions. To the contrary, Congress appreciated these other ramifications.

> A national environmental policy would, however, necessarily be concerned with natural resources issues. But the total environment needs of man - ethical, aesthetic, physical, and intellectual, as well as economic - must be taken into account.

115 *Cong. Rec.* S1784, 1787 (daily ed., February 18, 1969). The Senate Committee on Interior and Insular Affairs of the Senate, in categorizing an extremely long list of environmental quality problems, acknowledged that some of those problems may create conditions which "detract from man's social and psychological well-being." *S. Rep. No.* 91-296, 91st Cong., 1st Sess. 4 (1969).

Acknowledgement that there are emotional aspects of man's relationship with the physical environment does not, however, lead to the conclusion that Congress intended or directed that such *emotional responses* be identified or considered in the EIS assessment of *environmental effects*. Yet, the Court of Appeals has adopted just that approach.

Such a change in the role of the EIS should not, however, be sanctioned. This Court has previously acknowleged the marked difference between Congress' broad purpose in enacting NEPA and the specific procedural obligation Congress has imposed upon federal decisionmakers: "NEPA does set forth significant substantive goals for the

Nation, but its mandate to the agencies is essentially procedural." *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. at 558.

The congressional limitation of the EIS to the study of physical environmental effects is not inconsistent with Congress' concerns for aesthetics, psychological well-being and other human emotional responses. By assuring that the environmental effects which give rise to the emotional response are fully understood and considered, the EIS addresses those congressional concerns. The emotional response, even if accompanied by physical manifestations, remains a derivative phenomenon dependent exclusively on the individual mental reaction to the federal action, not a physical effect of the action. The case at issue vividly demonstrates this distinction inasmuch as it involves *only* an emotional response to the possibility of future nuclear accidents; there were no separate physical impacts on the environment.

Although Congress may have required the EIS examination of physical environmental effects in part because of potential emotional responses, this does not turn such responses into environmental effects which the EIS must examine. It is the interposition of the human mind that creates a distinct category of incidents, separate from physical environmental effects which the EIS can reasonably assess. The views of individuals on the proposed action, whether politically or emotionally based, are in the realm of policy considerations properly left to Congress and to Executive Branch officials implementing their specific legislative authority. The EIS is only one element in the decisional process and it is limited to physical environmental effects.

The Court of Appeals placed special emphasis on PANE's claim that individual emotional reactions resulted

in impaired health. However, the proper issue for determining application of NEPA was not whether the health of PANE's members was affected but rather the source of the health effects. The ailments alleged by PANE were produced by individual mental and emotional conditions; they did not arise from any effects on the environment of a federal action. Psychological impacts, whether strictly emotional or with physical manifestations, remain outside the scope of the EIS because they have their genesis in the mental state of the individual, not the physical environment.

Furthermore, even though characterized as "post-traumatic psychological distress," the responses of PANE's members are essentially no different in their derivation from any other adverse emotional reaction which may be engendered by disagreement with a federal decision. Such emotional responses have previously been held to be outside the scope of the EIS. *See, e.g., Maryland-National Capital Park and Planning Commission v. U.S. Postal Service,* 487 F.2d 1029, 1038-39 (D.C. Cir. 1973) where the court found that the EIS requirement of a "substantial inquiry" or "hard look":

> [w]as not contemplated, as a matter of reasonable construction of NEPA, where the claim of NEPA application is focused on alleged esthetic impact and the matters at hand pertain essentially to issues of individual and potentially diverse tastes.

Just as the decisionmaker should not have to quantify effects on human aesthetic enjoyment of nature in the EIS, he should not have to determine other emotional responses. *Hanly v. Kleindienst,* 471 F.2d 823, 833 (2d Cir. 1972), *cert. denied,* 412 U.S. 908 (1973).

II. The Court of Appeals' Decision Will Have a Significant Adverse Impact on NEPA by Injecting Political and Policy Considerations Into the EIS Process.

Excluding psychological stress from the scope of the EIS does not do violence to NEPA nor does it mean that there is no proper policy forum in which such contentions can be raised. The record reveals that an extensive review of PANE's contentions was made by the TMI-2 Commission. *See, Report of the President's Commission on the Accident at Three-Mile Island, The Need for Change: The Legacy of TMI* (Oct. 1979). Such strong emotional responses to nuclear power should be expressed to the Congress as part of its consideration of national policies on nuclear power. Conversely, the addition of such political considerations to the requirements of NEPA will wreak havoc with the EIS process.

The Court of Appeals' inclusion of such factors in the EIS is not based upon consideration of the proper role of the EIS in NEPA, nor upon congressional intentions as expressed in the legislative history, nor upon construction of any applicable prior case law. It is, instead, yet another judicial redefinition of the EIS as a conveniently available forum to compel examination of peripheral issues, along with the study of environmental effects, because of the court's concern that they will not receive adequate attention elsewhere. That concern, however, is properly a subject for Congress, not the courts; all effects of a congressional or administrative decision cannot be translated into "environmental effects" in order to fit them into the EIS review. This Court must curb such judicial reformulation of the congressionally-mandated EIS process where the obvious purpose is "to impose upon the agency [the court's] own notion of which procedures are best or most

likely to further some vague, undefined public good." *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. at 549.

In the thirteen years of NEPA's existence, the actions covered by NEPA, as well as the scope of an EIS, have been expanded significantly by the vast number of court opinions which have examined individual federal actions. While stretching NEPA, those decisions have heretofore maintained a thread of consistency. Courts have only required that federal agencies give the mandatory "hard look" to the physical impacts on the environment which may result from the action under review, not emotional responses.[1]

While the fabric of NEPA has some elasticity, it cannot and should not be considered infinitely expandable, as the Court of Appeals treats it. There must be a recognizable limit to the EIS process if it is to serve its intended function in federal decisionmaking. *Cf. NRDC v. Morton*, 458 F.2d 827, 837-38 (D.C. Cir. 1972). Acceptance of the limitations of the EIS process does not denegrate its importance. Rather, it preserves it. The EIS was and is meant to serve only one role in federal decisionmaking. While assuring that environmental values are *considered*, NEPA does not require that an agency "elevate environmental concerns over other appropriate considerations." *Stryker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227 (1980).

---

1. The many "socioeconomic" impact cases in which courts, with certain significant procedural limitations, have applied NEPA to "secondary" impacts provide no support for the interpretation of NEPA proffered by the Court of Appeals. Although secondary in nature, such impacts are physical effects suffered by the human environment as a result of the federal action. *Cf. Image of Greater San Antonio v. Brown, supra; National Association of Government Employees v. Rumsfeld, supra.* Such effects are not a function of human emotional reactions to the federal action.

The court below would like the EIS process to encompass all factors in any way related to a federal decision. Yet, assessment of emotional responses injects political and policy questions into the EIS. Indeed, the task of predicting or quantifying human emotions and responses, which are individual in nature and are influenced by the political views, social values, and emotional health of those individuals, would relegate to secondary importance the identification of direct physical effects on the environment, which is the intended function of the EIS. Even if an agency considers additional factors beyond physical environmental impacts, courts should not *mandate* consideration of factors beyond the statutory minimum imposed by NEPA for an EIS. *Cf. Kleppe v. Sierra Club*, 427 U.S. 390, 405-06 (1976).

The Court of Appeals majority did not, and indeed could not, convincingly limit the scope of its opinion. The potential situations in which a claim of psychological stress could be presented are limited only by the ingenuity of persons raising the contention. The Circuit Court majority's failure to draw a "bright line" establishing the intangible emotional reactions which must be considered under its new reading of NEPA is evidence of the impossible task of limiting the decision.

Instead, the decision lights a "bright beacon" for yet additional claims to be filed by opponents of controversial federal projects. Other actions which may present risks of physical harm to individuals will also produce real fears and emotional concerns. There is no reasonable basis upon which to determine whether fears and anxieties due to nuclear risks are any greater or more deserving of study in an EIS than emotional reactions of persons residing near a prison, a nuclear missile silo, an area of pesticide application, or a dam. Human emotions, such as fear of harm,

may even be more significant in those areas inasmuch as there is a higher probability of the physical harm associated with the activities occurring than an accident at a nuclear power plant. Strong emotional responses are also associated with other major activities which can alter the physical environment, including offshore oil leasing, mining and logging activities in national forests, location of high voltage transmission lines or even conventional electric generating facilities.

The majority's attempt to limit its decision to post-traumatic psychological stress caused by a near catastrophe finds no support in NEPA and serves only to illustrate the essentially political nature of the decision. Antipathy to nuclear power appears to be the *ratio decidendi*. As Judge Wilkey observed in his dissent:

> The majority's decision to ignore these many cases seems based ultimately on nothing more than a *political determination* that fears that Federal actions will 'change the character of the neighborhood, reduce property values, and increase the dangers of crime' are simply not worthy of consideration. Fears of nuclear power, on the other hand, must be considered, presumably because the majority considers them legitimate. *In each case, however, what we are dealing with are fears and anxieties; if NEPA embraces fears and anxieties in one, it must in all.* (Emphasis in original.)

678 F.2d at 241.

Unless this Court limits the scope of EIS to its intended function, NEPA may lose its utility. Political, emotional and philosophical reactions to federal decisions will arise no matter how this case is resolved. This Court must determine whether such reactions, even where so

strong they may produce ailments, must be examined in an EIS. Amicus submits that the mental basis of these reactions places them outside the realm of the physical environmental effects Congress specified that the EIS examine.

This Court has previously curtailed judicial expansion of the EIS beyond the precise procedural duty imposed by NEPA where the practical effects undercut the value and purpose of NEPA.

> Such an assertion of judicial authority would leave the agencies uncertain as to their procedural duties under NEPA, would invite judicial involvement in the day-to-day decisionmaking process of the agencies, and would invite litigation. . . . [I]t may be assumed that the balancing process devised by the Court of Appeals also would result in the preparation of a good many unnecessary impact statements.

Kleppe v. Sierra Club, *supra*, 427 U.S. at 406.

The practical effects associated with this decision are much more extreme and onerous than in *Kleppe*.[2] This Court should, therefore, review the decision and provide guidance to federal agencies before the Court of Appeals' decision leads to yet a new round of procedural battles under NEPA.

---

2. If the language of the majority below regarding NEPA's "continuing obligation" to prepare a supplemental EIS is not limited by the particular procedural situation presented by TMI-1, the Court of Appeals' expansion of NEPA to include psychological effects will be even more dramatic and far-reaching. Amicus NRECA shares the concerns expressed by the Solicitor General in footnote 12 of the United States' Petition.

CONCLUSION

The questions presented in the petitions for certiorari are of great importance to the development of NEPA and of major significance to all those whose activities fall within the requirements of NEPA. The petitions for certiorari should be granted.

Respectfully submitted,

G. WILLIAM FRICK
C. DAVID BARRIER
STEPHEN W. JACOBSON
LATHROP, KOONTZ, RIGHTER, CLAGETT, & NORQUIST
1140 Connecticut Avenue, N.W.
Washington, D.C. 20036
Attorneys for Amicus Curiae

Of Counsel:
GARY B. RANDALL
Regulatory Counsel
National Rural Electric Cooperative Association

September 29, 1982

Office - Supreme Court, U.S.
FILED
OCT 1 1982
ALEXANDER L. STEVAS,
CLERK

Nos. 81-2399 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY
AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION
AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Petitions for a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF OF *AMICUS CURIAE* SCIENTISTS AND ENGINEERS FOR SECURE ENERGY, INC. IN SUPPORT OF PETITIONS FOR A WRIT OF CERTIORARI

JAMES P. MCGRANERY, JR.
Counsel of Record

WILLIAM A. CARNAHAN
MINDY A. BUREN
LEBOEUF, LAMB, LEIBY & MACRAE
Suite 1100
1333 New Hampshire Avenue, N.W.
Washington, D.C. 20036
(202) 457-7500

Attorneys for Amicus Curiae

September 30, 1982

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	ii
INTEREST OF SCIENTISTS AND ENGINEERS FOR SECURE ENERGY, INC.	1
STATEMENT	3
SUMMARY OF ARGUMENT	7
ARGUMENT	8
I. THE DECISION ERRS IN REQUIRING THAT THE COMMISSION EMPLOY ADDITIONAL PROCEDURES TO RECONSIDER ITS DETERMINATION	8
II. THE DECISION DOES NOT RECOGNIZE THE ADEQUACY OF THE COMMISSION'S RESPONSE TO A NOVEL CONTENTION ALLEGING UNCERTAIN HARM FROM AN UNCERTAIN CAUSE	10
III. THE DECISION ERRS IN ITS UNSTATED ASSUMPTION THAT PANE'S CONTENTION IS MEDICALLY RECOGNIZED AND SCIENTIFICALLY VALID	11
A. Post Traumatic Psychological Distress is Not Medically Recognized As a Form of Mental Illness	12
B. The Incidence and Prevalence of Post Traumatic Psychological Distress Resulting From the TMI-2 Accident Cannot be Measured by Scientifically Valid Techniques	15
C. There is No Generally Accepted Scientific Method of Predicting the Incidence and Prevalence of Post Traumatic Psychological Distress	18
CONCLUSION	19

TABLE OF AUTHORITIES

CASES Page

Addington v. State of Texas, 441 U.S. 418 (1979).. 17
Frye v. United States, 293 F. 1013 (D.C. Cir. 1923) 16-17
National Wildlife Federation v. Appalachian Regional Commission, 677 F.2d 883 (D.C. Cir. 1981) 8
Natural Resources Defense Council, Inc. v. SEC, 606 F.2d 1031 (D.C. Cir. 1979) 8
Northern Indiana Public Service Co. v. Porter County Chapter of the Izaak Walton League, 423 U.S. 12 (1975) 8
North Slope Borough v. Andrus, 642 F.2d 589 (D.C. Cir. 1980) 8
People Against Nuclear Energy v. NRC, 678 F.2d 222 (D.C. Cir. 1982) 1
People v. Shirley, 31 Cal. 3d 18, 181 Cal. Rptr. 243, 641 P.2d 775 (1982) 17, 18
O'Connor v. Donaldson, 422 U.S. 563 (1975) 12
State of Alaska v. Andrus, 580 F.2d 465 (D.C. Cir.), *vacated in part as moot* 439 U.S. 922 (1978) 11
State of New York v. Hughes, No. 82-390 (N.Y. App. Div. July 9, 1982) 17
United States v. Kilgus, 571 F.2d 508 (9th Cir. 1978) 17
Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978) ("Vermont Yankee II") ..... *passim*
Warlich v. State of Arizona, 479 F.2d 1137 (9th Cir.), *cert. denied*, 414 U.S. 1011 (1973) 17

COMMISSION PROCEEDINGS

In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit 1 (ASLB, Sept. 21, 1979) (Memorandum and Order Ruling on Petitions and Setting Special Prehearing Conference) 3

TABLE OF AUTHORITIES—Continued

Page

In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit 1 (ASLB, Oct. 16, 1979) (Memorandum and Order on Motion to Modify) 4

In the Matter of Metropolitan Edison Company, Three Mile Island Nuclear Station, Unit 1 (Oct. 22, 1979) (PANE Brief in Support of Psychological Distress Contentions) 4

In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit 1 (Oct. 31, 1979) (Brief of Commission Staff on Psychological Distress Issues) 5

In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit 1 (Oct. 31, 1979) (Licensee's Brief Opposing Admission of Psychological Distress Contentions) 5

In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit 1, 11 N.R.C. 297 (ASLB, Feb. 22, 1980) (Certification to the Commission on Psychological Distress Issues) .. 5, 16

In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit 1 (Nov. 2, 1979) (PANE Preliminary Plan for Presentation of Evidence on Psychological Distress) 15

STATUTES

National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4347 (1976 & Supp. IV 1980) ....*passim*

REGULATIONS

10 C.F.R. § 2.714(a)(1) (1982) 8

10 C.F.R. § 2.714(b) (1982) 8

MISCELLANEOUS AUTHORITIES

AMERICAN PSYCHIATRIC ASS'N, THE DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (3d ed. 1980) 13, 17

TABLE OF AUTHORITIES—Continued

Page

BARTON, COMMUNITIES IN DISASTER: A SOCIOLOGICAL ANALYSIS OF COLLECTIVE STRESS SITUATIONS (1970) 14

Dynes and Quarentelli, *The Family and Community Context of Individual Reaction to Disaster*, in PARAD, RESNICK & PARAD, EMERGENCY AND DISASTER MANAGEMENT: A MENTAL HEALTH SOURCE BOOK (1976) 14

Ennis & Litwack, *Psychiatry and the Presumption of Expertise: Flipping Coins in the Courtroom*, 62 CALIF. L. REV. 693 (1974) 13

Perry & Lindell, *The Psychological Consequences of Natural Disaster: A Review of Research on American Communities*, in 3 MASS EMERGENCIES (1978) 14

Taylor, DELIVERY OF MENTAL HEALTH SERVICES IN DISASTERS: THE XENIA TORNADO (Disaster Research Center, Ohio State University, 1976) 14

WALKER, FRAIZE, GORDON & JOHNSON, SUMMARY REPORT OF THE WORKSHOP ON PSYCHOLOGICAL STRESS ASSOCIATED WITH THE PROPOSED RESTART OF THREE MILE ISLAND, UNIT 1 (NUREG/CP-0026/MTR-82W26 April 1982) 14, 16, 18-19

Wilson, *Disaster and Mental Health* in BAKER & CHAPMAN, MAN AND SOCIETY IN DISASTER (1962) 14

WORLD HEALTH ORGANIZATION, MENTAL HEALTH ASPECTS OF THE PEACEFUL USES OF ATOMIC ENERGY (TECHNICAL REPORT NO. 151, 1958) 13

BRIEF OF *AMICUS CURIAE*

In accordance with this Court's Rule 36.1, Scientists and Engineers for Secure Energy, Inc. ("SE_2") has received and filed with this Court the written consents of the parties to appear as *amicus curiae* in this proceeding. This brief is submitted by SE_2 in support of the petitions for certiorari filed by Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company, No. 81-2399, and by the United States Nuclear Regulatory Commission and the United States of America, No. 82-358, seeking review of the District of Columbia Circuit's decision in *People Against Nuclear Energy v. United States Nuclear Regulatory Commission*, 678 F.2d 222 (D.C. Cir. 1982) (Pet. App. 1a-76a).[1]

INTEREST OF SCIENTISTS AND ENGINEERS FOR SECURE ENERGY, INC.

SE_2 supports the petitions for a writ of certiorari to the judgment and opinion of the United States Court of Appeals for the District of Columbia Circuit in this matter. SE_2 is an incorporated nationwide organization, formed in the Spring of 1976, of over 1000 faculty members and researchers from American colleges and universities, both State and private, and other persons engaged in the sciences. Its purpose is to correct the alarming degree of misunderstanding on fundamental scientific and technological issues permeating the national energy debate, especially with respect to the balancing of environmental concerns. In pursuing this objective, SE_2 is committed to offering its views, based on the considerable knowledge and expertise of its members, to the public and to the various governmental agencies with responsibility for the development of a proper legal framework for the

[1] Because the petition for a writ of certiorari filed by the United States, No. 82-358, refers to the Petitioners' Appendix in No. 81-2399, we also refer to that appendix. Hereinafter, "Pet. App." signifies that appendix.

resolution of energy issues, including participation in judicial proceedings.

As citizens, members of SE_2 are deeply concerned for the well-being and future hopes of our society. SE_2 and its members have an interest in assuring that consideration of major federal actions is conducted under NEPA in accord with scientific principles and that debate of pseudo-scientific questions be excluded from the decision-making process. Therefore, they support the petitions urging the Court to review and reverse the decision of the court of appeals in this matter.

As scientists and engineers they are keenly aware of the many problems related to the production of needed electric power and the importance of a safe and secure energy base for the continued prosperity of the Country.

In their professional roles they are also keenly sensitive to the limits of scientific knowledge and meaningful debate.[2] They view the decision below as reaching beyond those limits to require a consideration of contentions not within the capability of science. In their view, that decision perverts scientific principles and the Commission's Congressional mandate by changing the issue from whether there is reasonable scientific and engineering assurance not to have fear, to whether fear may exist in the future regardless of a reasonable basis. It would transform a modern technical decisionmaking process into an elusive medieval quest to allay superstition, irrational fear and media-enhanced hysteria.

By abolishing appropriate limitations and thresholds for environmental consideration, the court of appeals would open the floodgates of endless, unrestrained, and uncontrollable regulatory filibuster.

---

[2] Jack Zusman, M.D., Director of the Mental Health Institute of the University of Southern Florida, provided particularly valuable assistance in the preparation of the medical and scientific aspects of this brief.

STATEMENT

In the wake of the accident at Three Mile Island Unit 2 ("TMI-2"), the Nuclear Regulatory Commission ("Commission") issued an order requiring that Three Mile Island Unit 1 ("TMI-1"), which had been shut down at the time by the licensee for routine maintenance and refueling, remain in a cold shutdown condition until after a public hearing on the issue of restart. (Pet. App. 3a-4a).

On August 9, 1979, the Commission established an Atomic Safety and Licensing Board ("Board") to rule on petitions to intervene, conduct a hearing, and certify the record to the Commission itself for final decision (Pet. App. 4a). In its discussion of the procedures to be followed at the hearing, the Commission explicitly addressed the certification procedure for psychological distress issues. On September 21, 1979, the Board scheduled a special prehearing conference to consider those psychological distress contentions.[3] The Board required that petitioners for leave to intervene provide the Commission staff and the licensee with draft contentions by October 5, 1979 and final contentions, "together with the bases for each contention set forth with reasonable specificity pursuant to § 2.714(b)," and briefs on psychological distress.[4]

---

[3] *In the Matter of Metropolitan Edison Company, Three Mile Island Nuclear Station, Unit No. 1* (ASLB, Sept. 21, 1979) (Memorandum and Order Ruling on Petitions and Setting Special Prehearing Conference) (unpublished), slip op. at 26.

[4] *Id.* at 24-25. In particular, the Board stated: "So that we may make appropriate recommendations to the Commission, we request any party or petitioner seeking to litigate psychological issues to submit a preliminary plan for the presentation of psychological distress evidence. The plan should address the expected availability of expert testimony; factual testimony; and evidence of indirect indicators of continuing psychological distress, such as population relocations and real estate values. Of particular value would be a

On October 1, 1979, People Against Nuclear Energy ("PANE") moved for an order deleting the Board's request for a preliminary evidentiary plan. On October 16, 1979, the Board denied PANE's Motion but granted PANE an extension of time in which to comply with its order.[5] On October 5, 1979, PANE submitted draft contentions for consideration (Pet. App. 115a-116a).

PANE's Contention No. 1 alleges that its members living in the communities around the TMI plant suffered fear, trauma, and distress from the accident at TMI-2 and that the renewed operation of TMI-1 would cause additional severe psychological distress (Pet. App. 115a).

PANE resisted the Board's request for a discussion of the state of the art of stress psychology, but briefly addressed the development of the case law establishing a cause of action in tort for mental distress damages and the ability of psychiatry and clinical psychology to establish a causal relationship between the injury and the defendant's conduct.[6]

---

discussion of the state of the art of stress psychology and whether it can produce reliable evidence on the subject at hand. As noted above, we are requesting a preliminary plan, and do not intend to bind the parties to a final approach to litigating the issue."

[5] *In the Matter of Metropolitan Edison Company, Three Mile Island Nuclear Station, Unit No. 1* (Oct. 16, 1979) (Memorandum and Order on Motions to Modify) (unpublished), slip op. at 2.

[6] *In the Matter of Metropolitan Edison Company, Three Mile Island Nuclear Station, Unit 1* (Oct. 22, 1979) (PANE Brief in Support of Psychological Distress Contentions) at 7-12. In conclusory fashion, PANE stated that:

> the available information establishes that there is a recognized diagnosis for exactly the type of psychological distress claim that PANE is now asserting. The diagnosable condition of "post-traumatic stress disorder" has now been recognized and included in the most recent draft of the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association (DSM-III) . . . .

Id. at 12-13. PANE's discussion of the ability of stress psychology to diagnose mental injury or illness relates to measurement

The staff argued that NEPA does not require consideration of potential psychological distress, noting[7] that "an agency need not engage in speculative prognostication as a part of the impact statement process."

The licensee similarly argued that PANE's psychological distress contention was not cognizable by the Commission under NEPA.[8]

In accordance with the Board's second Order, PANE finally filed a preliminary plan for the presentation of evidence on psychological distress and also a brief in reply to the briefs of the licensee and the staff.

On February 22, 1980, the Board issued its "Certification to the Commission on Psychological Distress Issues."[9] In certifying the record to the Commission, the Board stated its opinion that the Commission, within its discretion, may and should consider psychological stress contentions under NEPA in the restart proceeding.[10]

The Commission reviewed the Board's certification and voted 2-2, thus rejecting PANE's psychological distress contention (Pet. App. 77a-78a).

---

of results of a particular event and not to the capabilities for measurement of predicted potential fears or distress associated with on-going operation of Unit 1. *Id.* at 53-54. Also, PANE made no offer to relate the result in this case to the accident as opposed to misinformation about the accident.

[7] *In the Matter of Metropolitan Edison Company, Three Mile Island Nuclear Station, Unit No. 1* (Oct. 31, 1979) (Brief of Commission Staff on Psychological Distress Issues) at 51.

[8] *In the Matter of Metropolitan Edison Company, Three Mile Island Nuclear Station, Unit No. 1* (Oct. 31, 1979) (Licensee's Brief Opposing Admission of Psychological Distress Contentions).

[9] *In the Matter of Metropolitan Edison Company, Three Mile Island Nuclear Station, Unit 1*, 11 NRC 297 (ASLB Feb. 22, 1980) (Certification to the Commission on Psychological Distress Issues).

[10] *Id.* at 297.

In his separate statement, Chairman Ahearne agreed with the Board that the Commission is "not *required* to consider psychological stress" under NEPA and stated that the "best way to decrease such stress is to insure the plant is safe if it is approved for operation" (Pet. App. 80a).

In a particularly thorough discussion of the issues (Pet. App. 82a-91a), Commissioner Hendrie stated his view that under NEPA "the Commission has the discretionary authority to consider [psychological distress] effects, but that the present circumstances do not warrant such consideration in this case" (Pet. App. 87a).

> I believe . . . that the appropriate means for the Commission to deal with psychological stress in this case is to make a sound safety decision and to let the factual bases of its decision be disseminated widely

(Pet. App. 90a). Commissioner Hendrie further noted that "the problems of quantification and proof would be such as to make rational factfinding extremely difficult, as licensing boards and the Commission struggled to decide between the largely unprovable assertions of opposing sets of expert witnesses" (Pet. App. 89a).

Commissioners Gilinsky and Bradford stated their opinion that the Commission should exercise its discretion to consider psychological distress contentions under NEPA.[11]

---

[11] Commissioner Gilinsky said the principle reason for his vote was the request of t heCommonwealth of Pennsylvania (Pet. App. 91a). Commissioner Bradford, voting for consideration of "psychological stress and community fears" (Pet. App. 94a), recognized that he did not know "whether stress related to Unit 1 is provable, whether it is quantifiable, or whether we should do anything about it" (Pet. App. 93a).

This decision was affirmed by a 3-2 vote on reconsideration by a full Commission (Pet. App. 101a).

On PANE's petition for review, the court of appeals concluded that "PANE's allegation—in the wake of a unique and traumatic nuclear accident—that renewed operation of TMI-1 may cause medically recognized impairment of the psychological health of neighboring residents is cognizable under NEPA" (Pet. App. 16a). In reaching this conclusion, Judge Wright accepted PANE's asertion that "[p]ost-traumatic neuroses, . . . , can be diagnosed with reasonable medical certainty on the basis of standardized quantitative tests" (Pet. App. 10a). Judge Wright then ruled that the psychological *health* effects identified by PANE are included within the meaning of "health" for purposes of NEPA on the basis of their susceptibility to reasonably certain medical diagnosis (Pet. App. 16a-17a).

SUMMARY OF ARGUMENT

The decision of the court of appeals is yet another attempt by the D.C. Circuit to dictate new procedures to the Commission under the guise of interpreting NEPA. Further, the Commission decided that its Congressional mandate dictates that it perform its technical responsibilities in a manner to give reasonable assurance that there is no rational basis for fear; to the extent that PANE would have a separate consideration of fear itself, it simply failed to meet the threshold test approved by this Court in *Vermont Yankee II*. And, finally, the correctness of the Commission's decision does not depend on the inadequacy of PANE's proffer; no proffer in support of PANE's contention could show it to be susceptible to a reasonable degree of proof.

ARGUMENT

I. THE DECISION ERRS IN REQUIRING THAT THE COMMISSION EMPLOY ADDITIONAL PROCEDURES TO RECONSIDER ITS DETERMINATION

By requiring the Commission to *redetermine* whether, since the preparation of the original environmental impact statement for TMI-1, "significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility" (Pet. App. 104a) and, if so, to prepare a supplemental environmental impact statement, the court of appeals has rejected the procedures already employed by the Commission to consider this issue contrary to the direction of this Court in *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 554 (1978) (*"Vermont Yankee II"*). The court of appeals should have deferred to the Commission's interpretation of its own procedural requirements.[12]

In setting forth the procedures to be followed at the TMI-1 restart proceeding, the Commission not only followed its rules of procedure governing intervention, but supplemented those rules by allowing additional briefing of the psychological distress contentions. The Commission further required that the Board certify these issues, with or without a recommendation, to it for a decision. In carrying out this order, the Board required the parties to submit a preliminary plan for the presentation of evi-

---

[12] Pursuant to the Commission's procedures governing intervention, "[a]ny person whose interest may be affected by a proceeding and who desires to participate as a party shall file a written petition for leave to intervene." 10 C.F.R. § 2.714(a)(1) (1982). Prior to the prehearing conference, the petitioner must also supplement its petition to include a list of contentions and the "bases for each contention set forth with reasonable specificity." 10 C.F.R. § 2.714(b) (1982); *see Northern Indiana Public Service Co. v. Porter County Chapter of the Izaak Walton League*, 423 U.S. 12 (1975); *National Wildlife Federation v. Appalachian Regional Commission*, 677 F.2d 883 (D.C. Cir. 1981); *North Slope Borough v. Andrus*, 642 F.2d 589 (D.C. Cir. 1980); *Natural Resources Defense Council, Inc. v. SEC*, 606 F.2d 1031 (D.C. Cir. 1979).

dence and advise it as to the state of the art of stress psychology and its ability to produce reliable evidence on the subject of psychological distress.

Although it was not explicitly described as a threshold test proceeding, the procedures employed by the Commission in effect required PANE to make a "threshold showing" that such contentions were both relevant and susceptible to a reasonable degree of proof. *Vermont Yankee II*, 435 U.S. at 533-35. Given the novelty of PANE's contention, and the fact that the Court of Appeals for the Sixth, Seventh and Eighth Circuits have held that NEPA does not encompass the psychological effects of a proposed major federal action, the imposition of a threshold test by the Commission was neither arbitrary nor capricious and the court of appeals should have deferred to the agency's structuring of its own proceeding.

The D.C. Circuit may be dissatisfied with the decision reached by the Commission. However, that fact alone does not justify its mandate that the Commission determine if "significant new circumstances or information" have arisen with respect to the potential health effects of the operation of TMI-1 since the shut-down. The Commission has already employed its own procedures to redetermine that issue and was not convinced, on the basis of the reluctant proffer of evidence submitted, that PANE's psychological distress contention was within the scope of NEPA. Reversal by this Court is necessary to remind the D.C. Circuit, once again, "that the role of a court in reviewing the sufficiency of an agency's consideration of environmental factors is a limited one, limited both by the time at which the decision was made and by the statute mandating review." *Vermont Yankee II*, 435 U.S. at 555.

The court of appeals struggled twice with drafting a judgment so that it could state in the latter version that "[t]he Commission may choose the procedures by which" it complies with the order. (Pet. App. 32a n.6). This

statement does not show compliance with the Court's direction in *Vermont Yankee II*; rather, its mere existence violates that order.

II. THE DECISION DOES NOT RECOGNIZE THE ADEQUACY OF THE COMMISSION'S RESPONSE TO A CONTENTION ALLEGING UNCERTAIN HARM FROM AN UNCERTAIN CAUSE

As we describe in the third argument below, there is nothing in the medical or scientific literature that would allow the Commission to assess with any degree of certainty the increase in psychological distress after the TMI accident, much less to determine whether it is associated with mental illness.

More importantly, perhaps, there is nothing that would allow the Commission to assess whether any increase in psychological distress was a result of the accident as opposed to a result of misinformation about the accident. At the time of the accident, there were many reports of imminent disaster based principally on a misunderstanding of what was occuring. We now know that the radiation release was quite minor and that there has been no damage to person or property other than the reactor itself. This suggests that the origin of any psychological distress is that misinformation.

To ask the Commission to consider fears based on misinformation would deny the rational basis of its decisionmaking as well as that of our whole governmental process. The Commission has been commanded by statute to regulate the conduct of nuclear activities with reasonable assurance of the public health and safety. If anything, the TMI accident should reassure the public that the design of licensed systems will protect the public and allay fear that human error can cause great harm to the public.

We strongly agree with former Chairman Hendrie that the Commission's efforts are best spent assuring nuclear safety (and thus the absence of a rational basis for fear),

not in "fruitless speculation about means of mollifying irrational fears" (Pet. App. 90a).

PANE's request that the Commission consider its psychological distress contention was a request that "the agency . . . embark upon an exploration of uncharted territory." *Vermont Yankee II*, 435 U.S. at 553. It was therefore incumbent upon PANE to make a showing that its psychological distress contention was susceptible to a reasonable degree of proof cognizable under NEPA, through the submission of draft and final contentions, briefs, and a preliminary plan for the presentation of evidence. The fact that PANE resisted presenting such a plan and ultimately failed to persuade the Commission does not render the procedures employed by the Commission arbitrary and capricious. Where an agency is alerted to certain speculative environmental consequences of a proposed action, weighs the environmental costs of proceeding with the project without more and better information, and decides that that cost is outweighed by the public benefits of proceeding with the project without further delay, "the courts may not substitute their judgment for that of the decisionmaker and insist that the project be delayed while more information is sought." *State of Alaska v. Andrus*, 580 F.2d at 465, 473-74 (D.C. Cir.) *vacated in part as moot* 439 U.S. 922 (1978). The court of appeals ignored its own teachings in the decision below.

III. THE DECISION ERRS IN ITS ASSUMPTION THAT PANE'S CONTENTION IS MEDICALLY RECOGNIZED AND SCIENTIFICALLY VALID

PANE's psychological distress contention alleges that the TMI-2 accident "impaired the health and sense of well being" of its members and others living in the vicinity of the reactor and that renewed operation of TMI-1 "would cause severe psychological distress" to such individuals (Pet. App. 115a). A premise for the consideration of *any* contention is that it be "susceptible of a reasonable degree of proof." *Vermont Yankee II*, 435 U.S. at 553.

Thus, consideration of PANE's contention is required only if PANE can show that all three of the following elements, implicit in its contention, are susceptible to a reasonable degree of proof: (1) post traumatic psychological distress is a mental illness; (2) the incidence and prevalence of post traumatic psychological distress resulting from the TMI-2 accident among the population in the vicinity of the plant are determinable using scientifically valid methods; and (3) it is possible to predict, using scientifically valid methods, the incidence and prevalance of post traumatic psychological distress which would be caused by the restart of TMI-1. An examination of PANE's preliminary plan for presentation of psychological distress evidence, the state of the art of stress psychology, and the specific studies of the TMI-2 incident indicate that PANE not only did not, but could not, make the requisite showing to satisfy the threshold test as to any one, much less all three, of these elements.

A. *Post Traumatic Psychological Distress is Not Medically Recognized As a Form of Mental Illness.*

PANE's psychological distress contention confuses mental illness with mental health and both with psychological distress. The court of appeals assumes that post traumatic psychological distress is a form of mental illness and as such is the antithesis of mental health and well being. But the relevant literature indicates that there is no well-defined and measurable relationship between mental illness and psychological health. Nor is it established that mental distress, including post traumatic psychological distress, constitutes mental illness.

There is no clear division between mental illness and mental health.[13] What is labeled mental health or diag-

---

[13] *See, e.g., O'Connor v. Donaldson*, 422 U.S. 563, 578 (1975) (Burger, C. J. concurring): "The Court appropriately takes notice of the uncertainties of psychiatric diagnosis and therapy, and the reported cases are replete with evidence of the divergence of medical opinion in this vexing area [citation omitted]."

nosed as mental illness depends in part on societal values and the perceptions of the diagnostician.[14]

Before the Commission, PANE pointed to the fact that post traumatic psychological distress appears in THE DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (3d ed. 1980) ("DSM-III") as evidence that it is a recognized form of mental illness. That reliance is misplaced. DSM-III expressly states that "there is no satisfactory definition that specifies precise boundaries for the concept 'mental disorder' ". *Id.* at 5. DSM-III was developed "to provide clear descriptions of diagnostic categories in order to enable clinicians and investigators to diagnose, communicate about, study, and treat various mental disorders." *Id.* at 12. Thus, the manual is to be used to diagnose an individual *who has already been found to be mentally ill*, not to determine the existence of mental illness. DSM-III states that the premise for application of its diagnostic criteria "is an inference that there is a behavioral, psychological, or biological disfunction, and that the disturbance is not only in the relationship between the individual and society." *Id.* at 6. Efforts to determine the psychological impact of the development and use of nuclear power on societal health have been beset with such confusion from the outset.[15] Here, the confusion is compounded since that post traumatic psychological distress cannot be simply assumed to be a form of mental illness.

Stress is often a normal and healthy reaction to numerous events in modern-day life; and, in some instances, the absence of a stress reaction could be symptomatic of

---

[14] *See* Ennis & Litwack, *Psychiatry and the Presumption of Expertise: Flipping Coins in the Courtroom*, 62 CALIF. L. REV. 693, 708-09 (1974).

[15] *See* WORLD HEALTH ORGANIZATION, MENTAL HEALTH ASPECTS OF THE PEACEFUL USES OF ATOMIC ENERGY (TECHNICAL REPORT NO. 151, 1958).

mental illness. Experiencing stress following a catastrophic event therefore is not inconsistent with mental health and well being. In fact, numerous studies following the occurrence of a disaster have concluded that there was an overall beneficial effect on the exposed population. *See, e.g.*, Wilson, *Disaster and Mental Health* contained in BAKER & CHAPMAN, MAN AND SOCIETY IN DISASTER (1962) at 132-133. ("There is a good bit of evidence that disaster experience may constitute for many people an 'optimal stress' which promotes active mental harmony rather than psychiatric disorder.")[16]

For example, studies have found that the "extent of negative psychological consequences [of disasters] has been gravely overstated" and that, in fact, "[r]esearch based upon records of admissions to psychiatric treatment following disasters have [*sic*] indicated that such admissions declined rather than increased."[17]

More to the point, participants at a workshop on psychological stress associated with the proposed restart of Three Mile Island, Unit 1 convened by the Commission in response to the decision below, noted (Mitre Report, *supra*, note 16 at 11) that:

---

[16] *See also* BARTON, COMMUNITIES IN DISASTER: A SOCIOLOGICAL ANALYSIS OF COLLECTIVE STRESS SITUATIONS (1970); Dynes & Quarentelli, *The Family and Community Context of Individual Reactions to Disaster* in PARAD, RESNICK & PARAD, EMERGENCY AND DISASTER MANAGEMENT: A MENTAL HEALTH SOURCE BOOK (1976); TAYLOR, DELIVERY OF MENTAL HEALTH SERVICES IN DISASTER: THE XENA TORNADO (Disaster Research Center, Ohio State University 1976); WALKER, FRAIZE, GORDON & JOHNSON, SUMMARY REPORT OF THE WORKSHOP ON PSYCHOLOGICAL STRESS ASSOCIATED WITH THE PROPOSED RESTART OF THREE MILE ISLAND, UNIT 1 (NUREG/CP-0026/MTR-82W26, April 1982) ("Mitre Report").

[17] Perry & Lindell, *The Psychological Consequences of Natural Disaster: A Review of Research on American Communities*, in 3 MASS EMERGENCIES 105-15 (1978).

> In assessing the effect of nuclear power on the psychological health of the community, it was felt important to recognize that stress and its responses are not necessarily harmful. While some in a nuclear plant community may be harmfully stressed, others may not be stressed at all or may use stress as a catalyst for establishing a stress-relieving coping response. For example, political efforts may lead to community cohesiveness, promoting feelings of satisfaction among community members.

In sum, there is no medical consensus that post traumatic psychological distress in itself constitutes a mental illness or that it even impairs mental health and well being. To the contrary, social science literature strongly suggests that disasters often have a beneficial effect on mental health and social interraction.

B. *The Incidence and Prevalence of Post Traumatic Psychological Distress Resulting From the TMI-2 Accident Cannot be Measured by Scientifically Valid Techniques.*

PANE's preliminary plan for the presentation of evidence indicated that its case would have consisted of four parts: (1) the evaluation of studies done by others on the psychological impacts of the accident; (2) the presentation of a comprehensive study to be done by PANE's expert witnesses on impacts in the area within five miles of TMI; (3) the testimony of individuals concerning their own experiences; and (4) the conclusions of PANE's expert witnesses concerning the psychological and community health impacts of the TMI Unit 2 accident and of the renewed operation of TMI Unit 1.[18] The following analysis demonstrates that PANE's evidence would not be probative.

---

[18] *In the Matter of Metropolitan Edison Company, Three Mile Island Nuclear Station, Unit 1* (Nov. 2, 1979) (PANE Preliminary Plan for Presentation of Evidence on Psychological Distress) at 1.

Scientific Studies. (Parts 1 and 2): There is no generally accepted statistical method of measuring the incidence and prevalence of psychological distress in this designated population group. As the participants at the TMI workshop noted, "knowledge about the TMI population, while more complete than that available for most populations, is not sufficient. There are no baseline, pre-accident data on the population, and the post-accident data are incomplete." Mitre Report, *supra*, note 16 at 48. Any additional studies conducted by PANE would suffer from similar major deficiencies—*i.e.*, lack of pre-accident baseline data.

The measurement of psychological distress following the TMI-2 accident is further complicated since the accident was characterized by uncertainty at that time as to any actual damage. Thus, the TMI-2 situation is qualitatively different from other "disaster" studies because, to the extent psychological distress resulted at TMI, it resulted in large measure from uncertainty and fear of the unknown, rather than from significant actual loss or injury. Moreover, it is unclear whether fear and anxiety experienced by the population was a result of the accident or a result of the media's coverage.[19]

Anecdotal responses. (Part 3): Self diagnosis by individuals of an alleged affected population is simply non-probative of the contention advanced. The Board itself recognized the "doubtful value" of testimony regarding personal experiences. 11 N.R.C. at 309.

Expert opinions. (Part 4): The testimony of PANE's expert witnesses need not even be admitted in the restart proceeding due to the lack of a threshold competency. In *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir.

---

[19] The Mitre report stated: "It was noted that the media has a major effect on the public's understanding of nuclear power, since for most individuals it is their only contact, albeit an indirect one, with the technology." Mitre Report, *supra*, note 16 at xvi.

1923),[20] the D.C. Circuit refused to admit expert testimony regarding the results of a systolic blood pressure deception test into evidence because the test had:

> not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony deduced from the discovery, development, and experiments thus far made.

Application of the *Frye* rule is particularly apt here since this proceeding is not a traditional area of psychiatric expert opinion.[21] The limitations of psychiatric expert opinion evidence are explicitly noted in DSM-III, at 12:

> The use of this manual for non-clinical purposes, such as determination of legal responsibility, competency or insanity, or justification for third-party payment, must be critically examined in each instance within the appropriate institutional context.

In accepting at face value PANE's allegation "that renewed operation of TMI-1 may cause medically recognizable impairment of the psychological health of neighboring residents", (Pet. App. 16a), the court of appeals by legerdemain relieved PANE of its burden of establishing that the techniques to be relied on by its experts

---

[20] For the continuing vitality of the *Frye* rule, *see Warlich v. State of Arizona*, 479 F.2d 1137 (9th Cir.), *cert. denied*, 414 U.S. 1011 (1973) (exclusion of psychiatric testimony directed to a retrospective analysis of the subtle gradations of specific intent); *United States v. Kilgus*, 571 F.2d 508 (9th Cir. 1978) (exclusion of the results of a Forward Looking Infrared System); *State of New York v. Hughes*, No. 82-390 (N.Y. App. Div. July 9, 1982); and *People v. Shirley*, 31 Cal.3d 18, 181 Cal. Rptr. 243, 641 P.2d 775 (1981) (testimony of a witness concerning hypnotically produced recall).

[21] *See, e.g., Addington v. State of Texas*, 441 U.S. 418, 420 (1979) (civil proceeding brought under state law to commit an individual involuntarily to state mental hospital).

are "generally accepted as reliable in the relevant scientific community." *People v. Shirley*, 31 Cal.3d at 54. As the Supreme Court of California observed, the rule "is not fulfilled merely by evidence that one expert personally believes the challenged procedure is reliable; the court must be able to find that the procedure is generally accepted as reliable by the larger scientific community in which it originated." *Id.* at 54 n.32.

C. *There is No Generally Accepted Scientific Method of Predicting The Incidence and Prevalence of Post Traumatic Psychological Distress.*

Finally, and most significantly, there is no scientifically available method for predicting the incidence and prevalence of psychological distress as a result of any event, much less a benign event such as the restart of TMI-1. PANE's prediction is, in essence, a hypothesis. Although this hypothesis is couched in scientific terms, it does not meet the criteria necessary to constitute a legitimate scientific hypothesis primarily because there is no demonstrated statistical relationship between the occurrence of alleged psychological distress as a result of the TMI-2 accident and the occurrence of predicted psychological distress at the restart of TMI-1.

The general disaster studies conducted in various other contexts and the specific studies conducted on the psychological effect of the TMI-2 accident are the only bases on which to predict the occurrence of psychological distress as a result of the restart of TMI-1. The Mitre Report, *supra*, note 16 at xiii suggests that they are inadequate for this purpose:

> Although a body of literature exists on responses to natural disasters and other transient stresses, the issue of its applicability to a TMI-1 restart remains unresolved.

However, Ronald W. Perry, a participant in that TMI workshop, had a different view, *id.* at 101:

> If unit one is restarted, will a significant proportion of nearby citizens experience psychological stress and manifest debilitating symptoms? The answer is no. There is no social scientific evidence in the specific studies of the TMI area or in the general literature on life event stress which even remotely suggests otherwise.

Thus, a review of PANE's preliminary plan for presentation of psychological distress evidence, the state of the art of stress psychology, and the specific studies of the TMI-2 incident indicate that PANE could not make the requisite showing that its contention was either medically recognized or scientifically valid. The court of appeals erred in assuming otherwise.

CONCLUSION

For the reasons stated above, the petitions for a writ of certiorari should be granted and the decision of the court of appeals should be summarily reversed.

Respectfully submitted,

JAMES P. MCGRANERY, JR.
Counsel of Record

WILLIAM A. CARNAHAN
MINDY A. BUREN
LEBOEUF, LAMB, LEIBY & MACRAE
Suite 1100
1333 New Hampshire Avenue, N.W.
Washington, D.C. 20036
(202) 457-7500

Attorneys for Amicus Curiae
SCIENTISTS AND ENGINEERS FOR SECURE ENERGY, INC.

September 30, 1982

Office - Supreme Court, U.S.
FILED
DEC 16
ALEXANDER L. STEVAS,
CLERK

No. 81-2399, No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY,
and PENNSYLVANIA ELECTRIC COMPANY, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and THE UNITED STATES OF AMERICA, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

On Writs Of Certiorari To The United States Court Of Appeals For The District Of Columbia Circuit

BRIEF FOR PETITIONERS METROPOLITAN EDISON COMPANY, ET AL.

JAMES B. HAMLIN
Counsel of Record
GEORGE F. TROWBRIDGE
JOHN B. RHINELANDER
DEBORAH B. BAUSER
SHAW, PITTMAN, POTTS & TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Attorneys for Petitioners Metropolitan Edison Company, et al.

Of Counsel:
JAMES B. LIBERMAN
DEBEVOISE & LIBERMAN
26 Broadway
New York, N.Y. 10004
(212) 248-6900

December 16, 1982

PRESS OF BYRON S. ADAMS PRINTING, INC., WASHINGTON, D.C.

QUESTION PRESENTED

Whether the National Environmental Policy Act, 42 U.S.C. § 4321 et seq., requires the Nuclear Regulatory Commission to consider and evaluate effects on the psychological health of area residents resulting from their fears concerning the operation of a nuclear power plant, even if the Commission determines that the actual risk of such operation will not be significant.

TABLE OF CONTENTS

	Page
QUESTION PRESENTED	i
TABLE OF CONTENTS	ii
TABLE OF AUTHORITIES	iii
OPINIONS BELOW	2
JURISDICTION	2
STATUTE INVOLVED	2
STATEMENT OF THE CASE	3
A. The Accident At TMI-2	3
B. The TMI-1 Restart Proceeding	4
C. The Decision In The Court Of Appeals	11
SUMMARY OF ARGUMENT	16
ARGUMENT	18
NEPA REQUIRES CONSIDERATION OF ACTUAL ENVIRONMENTAL EFFECTS, NOT PUBLIC FEARS AND PERCEPTIONS OF THOSE EFFECTS	18
A. Nothing In NEPA Or Its Legislative History Requires Consideration Of Psychological Distress	19
B. The Courts Have Consistently Rejected Consideration Of Public Fears Under NEPA	24
C. Recognition Of Psychological Distress As An Environmental Impact Will Distort The NEPA Process And Promote Irrational Decision Making	29
CONCLUSION	42

TABLE OF AUTHORITIES

CASES: Page

Andrus v. Sierra Club, 442 U.S. 347 (1979) 30

Breckinridge v. Rumsfeld, 537 F.2d 864 (6th Cir. 1976), *cert. denied*, 426 U.S. 1061 (1977) 24

Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109 (D.C. Cir. 1971) 33

Chelsea Neighborhood Ass'ns v. United States Postal Service, 516 F.2d 378 (2d Cir. 1975) 27

Citizens Against Toxic Sprays, Inc. v. Bergland, 428 F. Supp. 908 (D. Ore. 1977) 21

City of New York v. United States Department of Transportation, 539 F. Supp. 1237 (S.D.N.Y. 1982) 25

Como-Falcon Coalition, Inc. v. United States Department of Labor, 465 F. Supp. 850 (D. Minn. 1978), *aff'd sub nom. Como-Falcon Community Coalition, Inc. v. United States Department of Labor*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980) 26

First National Bank of Chicago v. Richardson, 484 F.2d 1369 (7th Cir. 1973) 25

Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) 27, 28, 34, 38

Kleppe v. Sierra Club, 427 U.S. 390 (1976) 29

Maryland-National Capital Park & Planning Comm'n v. United States Postal Service, 487 F.2d 1029 (D.C. Cir. 1973) 21, 28, 36, 37

Monarch Chemical Works, Inc. v. Exon, 466 F. Supp. 639 (D. Neb. 1979) 27

National Organization for Reform of Marijuana Laws v. United States Department of State, 452 F. Supp. 1226 (D.D.C. 1978) 21

Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827 (D.C. Cir. 1972) 33, 38

Natural Resources Defense Council, Inc. v. NRC, 685 F.2d 459 (D.C. Cir. 1982), *cert. granted*, 51 U.S.L.W. 3419 (U.S. Nov. 29, 1982) (Nos. 82-524, 82-545, 82-551) 41

Table of Authorities Continued

Page

Nucleus of Chicago Homeowners v. Lynn, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976) 25, 26

Scientists' Institute for Public Information v. AEC, 481 F.2d 1079 (D.C. Cir. 1973) 36

Strycker's Bay Neighborhood Council v. Karlen, 444 U.S. 223 (1980) 30

Sunflower Alliance, Inc. v. NRC, No. 82-3563 (6th Cir., filed Sept. 13, 1982) 32

Trinity Episcopal School Corp. v. Romney, 387 F. Supp. 1044 (S.D.N.Y. 1974), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975) 27

Trout Unlimited v. Morton, 509 F.2d 1276 (9th Cir. 1974) 36

United States v. SCRAP, 412 U.S. 669 (1973) 29

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978) 15, 39, 40

STATUTES:

Atomic Energy Act of 1954, 42 U.S.C. § 2011 et seq. 6, 7, 8, 9, 11, 12, 13

National Environmental Policy Act, 42 U.S.C. § 4321 et seq. ..... *passim*

15 U.S.C. § 278f(a)(2)(E) 19, 20

28 U.S.C. § 1254(1) 2

28 U.S.C. § 2342(4) 9

29 U.S.C. § 669(a)(1) 20

42 U.S.C. § 4913(b)(1) 19

LEGISLATIVE MATERIALS:

National Environmental Policy: Hearings Before the Senate Committee on Interior and Insular Affairs, 91st Cong., 1st Sess. (1969) 23, 24

Environmental Quality: Hearings Before the Subcommittee on Fisheries and Wildlife Conservation of the House Committee on Merchant Marine and Fisheries, 91st Cong., 1st Sess. (1969) 23, 24

Table of Authorities Continued

Page

H.R. Rep. No. 378, 91st Cong., 1st Sess. (1969) 23
S. Rep. No. 296, 91st Cong., 1st Sess. (1969) 23
115 Cong. Rec. S7815-18 (daily ed. July 10, 1969) 22, 23, 30
115 Cong. Rec. H8272-73 (daily ed. Sept. 23, 1969) ... 23
115 Cong. Rec. H8280 (daily ed. Sept. 23, 1969) 24
115 Cong. Rec. S12,131 (daily ed. Oct. 8, 1969) 22

MISCELLANEOUS:

10 C.F.R. § 2.715(c) 9
47 Fed. Reg. 31,762 (July 22, 1982) 32
Breyer, *Vermont Yankee and the Courts' Role in the Nuclear Energy Controversy*, 91 Harv. L. Rev. 1833 (1978) 39
Liroff, *NEPA Litigation in the 1970s: A Deluge or a Dribble?*, 21 Nat. Resources J. 315 (1981) 29
Murphy, *The National Environmental Policy Act and the Licensing Process: Environmentalist Magna Carta or Agency Coup de Grace?*, 72 Colum. L. Rev. 963 (1972) 29
Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI (Oct. 1979) 3, 4, 35

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399, No. 82-358

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY,
and PENNSYLVANIA ELECTRIC COMPANY, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and THE UNITED STATES OF AMERICA, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

On Writs Of Certiorari To The United States Court Of Appeals For The District Of Columbia Circuit

---

BRIEF FOR PETITIONERS METROPOLITAN EDISON COMPANY, ET AL.

Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company

("Public Utilities"), petitioners in No. 81-2399, submit this brief on the merits in these consolidated cases.[1]

OPINIONS BELOW

The opinions and Amended Judgment of the court of appeals are reported at 678 F.2d 222 (D.C. Cir. 1982). They are reproduced in the appendix to the petition for a writ of certiorari in No. 81-2399 ("Pet. App.") at 1a.

JURISDICTION

The Amended Judgment of the court of appeals was rendered without opinions on April 2, 1982, Judge Wilkey dissenting (Pet. App. 103a).[2] A slightly modified version of the Amended Judgment was issued by the court of appeals with its opinions on May 14, 1982. 678 F.2d at 235-36 (Pet. App. 29a-30a). The Public Utilities filed their petition for a writ of certiorari on July 1, 1982 in No. 81-2399. The government was granted extensions of time to file its petition for a writ of certiorari until August 30, 1982, and its petition was filed on that day in No. 82-358. Both petitions were granted on November 1, 1982. The jurisdiction of this Court rests on 28 U.S.C. § 1254(1).

STATUTE INVOLVED

This case involves the National Environmental Policy Act, 42 U.S.C. § 4321 et seq. ("NEPA"). Sections 2, 101

---

[1] In compliance with Supreme Court Rule 28.1, the parent and affiliate corporations of the Public Utilities were listed on page i of their petition for a writ of certiorari.

[2] The April 2 Amended Judgment substantially altered and replaced an initial Judgment issued without opinions by the court of appeals on January 7, 1982 (Pet. App. 105a).

and 102 of NEPA, 42 U.S.C. §§ 4321, 4331, 4332, are reproduced at Pet. App. 109a-113a.

STATEMENT OF THE CASE

A. The Accident At TMI-2

The Public Utilities are the owners of a two-unit nuclear power plant near Middletown, Pennsylvania, known as Three Mile Island Nuclear Station, Units 1 and 2 ("TMI-1" and "TMI-2"). The Nuclear Regulatory Commission ("NRC") issued an operating license for TMI-1 in 1974, and it went into operation shortly thereafter. An operating license for TMI-2 was issued in 1978, and it began operating that year. At the time each unit was licensed, the NRC conducted an extensive safety review and complied with NEPA by preparing an extensive environmental impact statement ("EIS") describing in detail the environmental impacts of plant operation.[3]

On March 28, 1979, a serious accident occurred at TMI-2. TMI-1 was shut down for normal refueling and maintenance at the time, and it was not involved in the accident. The President's Commission appointed to investigate the accident found that although there was considerable damage to the TMI-2 plant, the radiation released during the accident was so low that the actual effect on the physical health of the public will be negligible.[4] Specifically, the maximum estimated off-site radiation dose received by

---

[3] The EIS for operation of TMI-1 was issued in December, 1972; the EIS for operation of TMI-2 was issued in December, 1976. *See* Joint Appendix ("J.A.") at 50.

[4] *Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI* at 12 (Oct. 1979) (J.A. 88) (hereinafter "*Report of the President's Commission*").

any one individual was less than annual natural background radiation in the area, and the average dose to a person living within five miles of the plant was no more than 10% of annual background radiation. *Report of the President's Commission* at 34 (J.A. 100); *see also* J.A. 76-77.

The President's Commission also concluded that the most serious health effect of the accident was severe mental stress, which was "short-lived." *Id.* at 13 (J.A. 90). The stress resulted primarily from well-publicized concerns about the possibility of a hydrogen bubble explosion within the reactor vessel, and from an evacuation advisory prompted by an assessment of off-site radiation doses. *Id.* Yet it is now agreed that the concern about a hydrogen explosion was "a groundless fear" caused by an unfortunate "scientific error" by the NRC. *Id.* at 18, 126 (J.A. 98, 103). And the NRC radiation dose assessment leading to the evacuation advisory was simply a misunderstanding of the actual data. *Id.* at 18, 118 (J.A. 98, 101-02). Thus it is fair to say that there was no actual danger to the public and that the mental stress was caused primarily by confusion and misinformation.

B. The TMI-1 Restart Proceeding

On July 2, 1979, the NRC took the extraordinary step of issuing an immediately effective order—without prior notice or hearing—requiring that TMI-1 (the undamaged unit) remain shut down until after a public adjudicatory hearing to determine whether there was reasonable assurance that the Public Utilities could restart and operate the unit without endangering the health and safety of the public. 44 Fed. Reg. 40,451 (July 10, 1979) (J.A. 8). On August 9, 1979, the NRC issued a further order specifying the procedural format for the restart hearing and the

safety issues to be considered, including plant design and procedures, emergency planning, management capability and technical resources, and operator training. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-79-8, 10 N.R.C. 141 (1979) (J.A. 9-25). An Atomic Safety and Licensing Board comprised of three administrative judges was established to conduct the proceeding and to make a recommendation on restart of TMI-1; the final decision on whether to allow restart was reserved to the Commission itself. 10 N.R.C. at 146-47, 149 (J.A. 17, 21).

On the issue of psychological distress, the August 9 order provided as follows:

> While real and substantial concern attaches to issues such as psychological distress and others arising from the continuing impact of aspects of the Three Mile Island accident unrelated directly to exposure to radiation on the part of citizens living near the plant, the Commission has not determined whether such issues can legally be relevant to this proceeding. Any party wishing to raise such subjects as contentions, or as aspects of separate contentions, should brief the Atomic Energy Act and National Environmental Policy Act issues he believes appropriate to the Board as part of the contention acceptance process set out in the Commission's regulations. The Board should then certify such issues to the Commission for final decision prior to the issuance of its prehearing conference order pursuant to 10 CFR 2.752(c), either with or without its recommendation on such issues, as it deems appropriate under the circumstances.

Id. at 148 (J.A. 20). Following issuance of this order, Respondent People Against Nuclear Energy ("PANE") sought to intervene in the restart proceeding and proposed to litigate two contentions relating to psychological

distress.[5] Contention No. 1 alleged in substance that as a result of the TMI-2 accident, PANE's members had suffered post-traumatic psychological distress manifested both in "feelings of increased anxiety, tension and fear, a sense of helplessness" and in physical symptoms such as skin rashes, aggravated ulcers, and skeletal and muscular problems. PANE further alleged that renewed operation of TMI-1 would remind its members of the "terror" they felt during the accident and of "the possibility that it will happen again." According to PANE, the "ever present spectre of disaster" at TMI-1 will cause psychological distress, making it "impossible" to operate the plant without endangering the public health and safety. PANE's Contention No. 2 alleged that the accident has undermined citizen confidence in community institutions and has made it difficult to attract desirable businesses and residents to the TMI area. According to PANE's allegations, if TMI-1 is restarted the potential for another accident will exacerbate these alleged problems, "will further stress the community infrastructure, causing increased loss of confidence and a breakdown of the social and political order," and will cause severe harm to "the stability, cohesiveness and well being of the communities" surrounding TMI-1.

In accordance with the Commission's instructions, the parties submitted to the Licensing Board extensive briefs on the issue of whether PANE's contentions are legally cognizable under NEPA or the Atomic Energy Act, 42 U.S.C. § 2011 et seq. The Licensing Board certified the question to the Commission along with its recommenda-

---

[5] PANE's psychological distress contentions are reproduced at Pet. App. 115a-116a.

tions on February 22, 1980. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), LBP-80-8, 11 N.R.C. 297 (1980) (J.A. 29-47). The Board concluded that psychological distress "is probably not cognizable under the Atomic Energy Act . . . ." 11 N.R.C. at 299 (J.A. 31). With respect to NEPA, the Board concluded that the statute "permits" the NRC to consider "community fears," and it recommended that such issues be considered "for the purpose of directly reducing the causes of psychological stress . . . ." *Id.* (J.A. 31-32). The Licensing Board did not find that NEPA *requires* consideration of psychological distress, and indeed it expressed doubt that such distress could be factored into a full cost/benefit balancing in an EIS. Although the Board found that PANE had established "a sufficient prehearing basis" for its contentions (J.A. 36 n.8), it nevertheless concluded:

> We cannot identify a source of evidence which would permit the measurement of the psychological stress phenomenon well enough for use in a full-scale cost/benefit balancing in an EIS. Nor do we know whether or not the state of the art can now produce such evidence.

Id. at 305 (J.A. 40-41).

After reviewing the Licensing Board's certification, the Commission itself split 2-2 on the issue of whether PANE's contentions should be admitted in the restart proceeding. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-39, 12 N.R.C. 607 (1980) (Pet. App. 77a-100a). Each of the four Commissioners then in office wrote a separate opinion. Commissioners Bradford and Gilinsky concluded that the Licensing Board should be permitted to admit contentions relating to psychological stress. Chairman Ahearne agreed with the Licensing Board that psychological stress "is

probably not cognizable under the Atomic Energy Act," and that the NRC is "not *required* to consider psychological stress" under NEPA. *Id.* at 609-10 (Pet. App. 80a) (emphasis in original). In rejecting PANE's contentions, Chairman Ahearne agreed with the Board that "the best way to minimize any psychological stress in the communities around TMI-1 is to make the plant safe or not allow it to operate." *Id.* at 609 (Pet. App. 79a).

Commissioner Hendrie also concluded that psychological stress was not a proper issue for litigation in the restart proceeding, and he explained his views in a lengthy opinion. He began by pointing out that "the psychological stress at issue is not that associated with actual exposure to radiation—although [PANE's members] may have been so exposed—but the stress caused by the possibility that they and others might be so exposed by future operation. There is no way to allay that fear except not to build or operate the reactor." *Id.* at 612 (Pet. App. 82a). Commissioner Hendrie believed that it would be contrary to the NRC's statutory mandate "to deny permission to operate the reactor regardless of our judgment that the plant is safe from a technical standpoint." *Id.* In his view, NRC decisions should be based upon the actual impact of the plant, not on public perceptions of the impact:

> Intervenors' argument is essentially that even if we are satisfied that the environmental impact is minimal, we must nevertheless hear evidence on and consider in our decision, their fears that we are wrong and the mental stress thus engendered. The short answer is that Congress had already decided that the country is to have a nuclear power program even if it makes some people uneasy.

Id. at 618 (Pet. App. 90a-91a).

The procedural effect of the Commission's tie vote was to exclude PANE's contentions and, because PANE had no other contentions, to exclude PANE itself from the restart proceeding.[6] PANE thereupon sought review of the NRC's decision in the court of appeals pursuant to the jurisdiction conferred by 28 U.S.C. § 2342(4) and 42 U.S.C. § 2239(b).

While the psychological distress issue was being considered by the Commission, the TMI-1 restart hearing went forward before the Licensing Board. It was a truly massive proceeding. Nine groups and individuals intervened, and the Commonwealth of Pennsylvania and several other local governmental entities were admitted as special participants under the NRC's regulations. 10 C.F.R. § 2.715(c). More than one hundred separate contentions were proposed for litigation in the proceeding. The evidentiary hearing began on October 15, 1980, and continued until July 9, 1981. The record was later reopened, and further evidentiary hearings were held from November 11, 1981 through December 10, 1981. More than 175 witnesses testified, producing a transcript of more than 26,000 pages. Thousands of pages of prefiled written direct testimony and documentary exhibits were also filed. The hearing covered in excruciating detail virtually every plausible safety concern relating to operation of TMI-1, limited only by the requirement that the

---

[6] One of the five seats on the Commission was vacant at the time of the 2-2 vote. After the appointment of a fifth Commissioner, the NRC reconsidered the matter and a majority of the Commissioners voted to adhere to the result previously reached and to continue excluding PANE's contentions from the restart proceeding. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-81-20, 14 N.R.C. 593 (1981) (Pet. App. 101a-102a).

concern bear some reasonable nexus to the TMI-2 accident. PANE chose not to participate in these hearings and indeed it advised the Licensing Board that the point of its contentions was not "the actual safety threat of TMI Unit 1," since PANE's members allegedly would suffer stress from operation of the plant "regardless of whether TMI Unit 1 were absolutely safe . . . ."[7]

During the course of the restart proceeding, the NRC Staff also prepared an Environmental Impact Appraisal ("EIA") (J.A. 48-65) and a supplemental EIA (J.A. 66-86) evaluating the environmental impacts of restarting TMI-1.[8] The Staff reviewed the full EIS that was issued at the time TMI-1 was licensed, and it analyzed the new or changed impacts that might be associated with restart. The Staff's conclusion was that restart of TMI-1 will not result in any significant environmental impacts beyond those already considered in the original EIS.

The Licensing Board has now completed its work and has issued three decisions totalling some 900 pages that together cover all of the issues litigated in the restart proceeding.[9] The Board's recommendation to the Com-

---

[7] PANE Reply Brief on Psychological Distress Issues, dated November 7, 1979, at 12 (Joint Appendix in the court of appeals at 225).

[8] In accordance with the Commission's order, the Staff did not include psychological distress in its appraisal.

[9] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), LBP-81-32, 14 N.R.C. 381 (1981) (management capability and technical resources); *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), LBP-81-59, 14 N.R.C. 1211 (1981) (plant design and procedures, separation of Unit 1 and Unit 2, and emergency planning); *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), Partial Initial Decision of July 27, 1982 (operator training and examinations).

mission is that the Public Utilities be permitted to restart TMI-1.

C. The Decision In The Court Of Appeals

In the court of appeals, PANE argued that its contentions were cognizable under NEPA and the Atomic Energy Act and that the NRC was required to admit and allow litigation of the contentions in the TMI-1 restart proceeding. The Public Utilities intervened and argued, along with the NRC, that the Commission's ruling should be affirmed because psychological distress and resultant community well-being are not cognizable under NEPA or the Atomic Energy Act. The case was argued on November 17, 1981, before a panel composed of Circuit Judges Wright and Wilkey and Senior Circuit Judge McGowan.

On January 7, 1982, the court of appeals issued a brief Judgment, without opinions, from which Judge Wilkey dissented. (Pet. App. 105a-107a). The Judgment directed the NRC to prepare an environmental assessment of the effects of restarting TMI-1 on the psychological health of neighboring residents and on the well-being of surrounding communities. The NRC was further ordered to determine on the basis of the environmental assessment whether a full EIS was required under NEPA. The Judgment also directed the NRC to prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.[10] Finally, the court of appeals enjoined the NRC from making a decision on the restart of TMI-1 until it had "complied

[10] The NRC prepared such a statement and submitted it to the court of appeals on March 30, 1982. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-82-6, 15 N.R.C. 407 (1982).

with the requirements of" NEPA as described in that Judgment.

On April 2, 1982, the court of appeals issued an Amended Judgment superseding the January 7 Judgment, again with no opinions.[11] (Pet. App. 103a-104a). The Amended Judgment ordered the NRC to determine, using its own procedures, whether significant new circumstances or information concerning psychological health impacts of operating TMI-1 have arisen since the preparation of the original EIS at the time TMI-1 was licensed. If so, the NRC was required to prepare a supplemental EIS considering both psychological health effects and the effects on the well-being of surrounding communities. In light of "current operating difficulties at TMI-1,"[12] the Amended Judgment vacated the injunction against making a restart decision, but required the NRC to give PANE and the court of appeals 30 days' notice if it intended to authorize restart "prior to complying with its obligations under NEPA." The Amended Judgment said nothing about the Atomic Energy Act.

On May 14, 1982, the court of appeals finally issued its opinions in the case, along with another Amended Judgment that did not differ significantly from the April 2

---

[11] Judge Wright's subsequent majority opinion on NEPA explained that the January 7 Judgment "was replaced on April 2, 1982 and is no longer in effect." 678 F.2d at 226 n.4 (Pet. App. 8a n.4).

[12] The court of appeals was referring to defects found in some of the steam generator tubes at TMI-1—a problem unrelated to the issues in the restart proceeding itself. The Public Utilities' best estimate is that the steam generators will be repaired on a schedule that would allow restart of TMI-1 in March or April of 1983.

Amended Judgment. 678 F.2d 222 (Pet. App. 1a-76a).[13] Judge Wright, joined by Judge McGowan, held that under NEPA an agency is required to evaluate effects on human health and that "health encompasses psychological health." 678 F.2d at 228 (Pet. App. 13a). Judge Wright concluded that although NEPA does not encompass "mere dissatisfactions" arising out of "social opinions, economic concerns, or political disagreements," it does apply to "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." *Id.* at 230 (Pet. App. 16a-17a). The court further stated that the NRC's "continued exercise of supervisory responsibility" over operation and maintenance of TMI-1 constitutes major federal action within the meaning of NEPA, thereby imposing upon the Commission a continuing duty to comply with NEPA's requirements. *Id.* at 231 (Pet. App. 19a).[14] Under the court's view of this continuing duty, the NRC is obligated to determine whether "significant new circumstances or information" have arisen with respect to the potential psychological

---

[13] Judge Wilkey, joined by Judge McGowan, wrote an opinion affirming the NRC's determination that psychological distress is not cognizable under the Atomic Energy Act. Judge Wright dissented from that holding. None of the parties has sought review of the court of appeals' holding under the Atomic Energy Act.

[14] The Public Utilities believe that the court's statements with respect to the NRC's continuing duties under NEPA are erroneous. As Judge Wilkey pointed out, the majority's conclusion is tantamount to holding that the NRC is engaged in a proposed major federal action "every second of every day," which may "significantly increase the NEPA burden on regulatory agencies in the future." 678 F.2d at 244, 245 (Pet. App. 49a, 50a). We did not specifically present this error for review because a reversal on this ground alone would not necessarily dispose of the case permanently.

health effects of operating TMI-1 since the facility was licensed. *Id.* at 235 (Pet. App. 30a). If the result of this threshold determination is affirmative, then the NRC must prepare a supplemental EIS on psychological health effects. Finally, Judge Wright concluded that PANE's Contention No. 2—dealing with community cohesiveness, stability and well-being—concerns so-called "secondary" socio-economic impacts that need not be considered under NEPA unless a full EIS is otherwise required. The court held that if a supplemental EIS is required to evaluate psychological health effects, the document must also include an analysis of the secondary impacts alleged in PANE's Contention No. 2. *Id.* at 230-31 (Pet. App. 17a-18a).

Judge Wilkey dissented at length from the court's holding under NEPA. He found the majority's reading of NEPA unwise, unwarranted and likely to have a serious adverse impact on the nuclear industry and on all federal agencies subject to NEPA's requirements. PANE's argument, he noted, is not that the actual risks associated with operation of TMI-1 will affect human health, but rather "that individuals' *fears* of an accident at the plant, combined with their lack of confidence in the NRC, will lead to an extension of the psychological stress allegedly caused by the TMI-2 accident." *Id.* at 239 (Pet. App. 37a) (emphasis in original). Thus instead of assessing the actual safety risk of a proposed activity, the agency "is now required to assess *how people perceive and react to the risk*." *Id.* (emphasis in original). In the case of TMI-1, this means that the NRC must "determine whether people so fear renewed operation" that such operation should not go forward, regardless whether the NRC's assessment of "the actual risk indicated that the impact on health will not be significant." *Id.* Judge Wilkey believed that this "takes NEPA far beyond its intended purpose,"

and substitutes the views of area residents—"no matter how scientifically ignorant and divorced from reality those views (fears) may be"—for the judgment that Congress has already made in the case of nuclear power. *Id.* (Pet. App. 37a, 38a). With respect to the congressional judgment on nuclear power, Judge Wilkey quoted this Court's holding that "[n]uclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try nuclear energy . . . ." *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 557-58 (1978). Thus in Judge Wilkey's view, the effect of the majority's holding "would be to let any special interest group effectively repeal an act of Congress if it could whip up sufficient hysteria." *Id.* (Pet. App. 38a).

Judge Wilkey was also concerned about the practical difficulties of complying with the majority's decision. He pointed out that the issue is not how much psychological damage was caused by the TMI-2 accident, but "how much *additional* damage will result from TMI-1's restart." *Id.* at 240 (Pet. App. 40a) (emphasis in original). This he thought to be "particularly ephemeral and speculative since it is not subject to *measurement* at all." *Id.* (Pet. App. 40a-41a) (emphasis in original). Therefore, the NRC will be forced to "*predict* how every individual in the TMI area will react to the restart." *Id.* (Pet. App. 41a) (emphasis in original). In summary, Judge Wilkey concluded that Congress did not intend NEPA "to encompass an effect which not only varies from individual to individual, but which is also entirely subjective." *Id.* at 241 (Pet. App. 41a).

Judge Wilkey concluded his dissent as follows:

> We have thus come a long way in fifty years, from a time when the President of the United States was

> widely and enthusiastically applauded for declaring: "The only thing we have to fear is fear itself." Now the fear itself necessitates an environmental assessment. All risky activity must grind to a halt in the interim. Inaction has become epidemic, and delay is maximized. I do not believe the Congress intended NEPA to constrain federal action on these psychological and emotional bases.

Id. at 254 (Pet. App. 69a).

SUMMARY OF ARGUMENT

NEPA requires consideration of the actual effects of major federal actions, *not* the public's fears and perceptions of those effects, nor the psychological distress and associated physical symptoms caused by such fears and perceptions. The court of appeals' departure from this basic principle finds no support in the text of NEPA itself or in its legislative history. Congress clearly expected that NEPA would enhance the general well-being of mankind. However, there is no indication that federal agencies were intended to consider and evaluate the psychological and emotional aspects of man's existence directly and independently of the physical environment. Rather, Congress believed that if the quality of the physical environment were improved and maintained, general emotional well-being would flow as an inevitable and salutary by-product. By ordering a direct assessment of public emotions, the court below has confused a legislative goal with the means Congress chose to achieve that goal. Federal agencies are required only to consider the actual physical impacts of a proposed action; beyond that, the courts must accept the congressional judgment that if we take care of our physical surroundings, our general emotional well-being will be the beneficiary.

The decision of the court below is also inconsistent with the vast majority of lower court cases that have considered the question presented here. Those cases have consistently held that while actual impacts, such as an increased crime rate, must be considered under NEPA, public fear of crime in and of itself need not be considered. The court of appeals gave no persuasive reason in law or logic for rejecting the broad judicial consensus reached in other cases.

Finally, the decision below is contrary to all notions of sound public policy because it tends to promote irrational decision making, to distort the NEPA process, and to consume inordinate agency resources without yielding any meaningful public benefits. Judge Wright's reasoning would require the NRC to deny a license for a nuclear power plant found to be safe and environmentally benign if enough people were sufficiently fearful of the plant. Public fears—even those based on misperceptions and erroneous information—could be used to negate the best scientific judgments of the technical agency charged by Congress with the responsibility for regulating nuclear power. If the administrative agency decision-making process is to turn on fears and anxieties rather than the actual effects of a project, then NEPA will have become totally divorced from reality and its scope will be limited only by the imagination. The court of appeals' decision also distorts NEPA's traditional focus upon protection of the physical environment. Under PANE's theory, psychological reactions may tip the NEPA balance away from the alternative that is the least harmful to the actual environment, and it may cause complete abandonment of environmentally benign projects. Recognition of psychological stress as an "environmental effect" can only dilute NEPA's effectiveness in protecting the quality of the physical environment. Implementation of NEPA will also

be diluted by a serious diversion of agency resources. For each federal action, government personnel will now have to predict and evaluate what is essentially unknowable: how individuals will perceive and react emotionally to the project. The court of appeals made no attempt to consider the feasibility, cost and usefulness of the task it was assigning to the NRC and other federal agencies. If such a task is to be assigned at all, it is for Congress to do so, not the court of appeals through a distortion of NEPA.

ARGUMENT

NEPA REQUIRES CONSIDERATION OF ACTUAL ENVIRONMENTAL EFFECTS, NOT PUBLIC FEARS AND PERCEPTIONS OF THOSE EFFECTS

NEPA requires consideration of the actual effects of major federal actions, assessed through the best scientific and technical judgments that can be brought to bear on the subject. It does *not* require consideration of the public's fears and perceptions of those effects, nor the psychological distress and associated physical symptoms engendered by such fears and perceptions. In this case the NRC has analyzed the safety of TMI-1 in the extensive restart hearing, and it has assessed the actual environmental effects of plant operation in the original EIS and in an EIA and a supplemental EIA during the restart proceeding. Nothing more is required. The NRC is not obliged to consider the psychological distress resulting from PANE's fears, however genuine and acute, that the NRC may be wrong in its technical judgments about the actual safety of TMI-1. The court of appeals, however, imposed just such an obligation on the NRC. As shown below, the court's decision is contrary to the text of NEPA, its legislative history, pertinent case law, and considerations of sound public policy. Accordingly, the court of appeals' decision must be reversed.

A. Nothing In NEPA Or Its Legislative History Requires Consideration Of Psychological Distress

One looks in vain for anything in the text of NEPA itself that authorizes the result reached by the court of appeals. Section 2 of the Act, 42 U.S.C. § 4321, generally declares the broad purposes of NEPA, including the promotion of "harmony between man and his environment," prevention of damage to "the environment and biosphere," and enrichment of the "understanding of the ecological systems and natural resources." Section 101, 42 U.S.C. § 4331, provides a somewhat more detailed specification of the nation's environmental policy. It recognizes the "profound impact" of man's activities on "the natural environment" and assigns to the federal government the responsibility to assure, among other things, that all Americans have "safe, healthful, productive, and esthetically and culturally pleasing surroundings" and that the environment can be used "without degradation, risk to health or safety, or other undesirable and unintended consequences." Section 102(c), 42 U.S.C. § 4332(C), is, of course, the crucial "action-forcing" provision of NEPA, requiring federal agencies to include in every proposal for major federal action significantly affecting the quality of the human environment a "detailed statement" describing the "environmental impact of the proposed action."

There is nothing on the face of the statute suggesting that agencies must ascertain and evaluate the psychological state of any person or population group.[15] Certainly

---

[15] In other statutes passed before and after NEPA, Congress has expressly said so when it wanted agencies to study psychological effects. *See, e.g.*, 42 U.S.C. § 4913(b)(1) (EPA to investigate "psychological and physiological effects of noise" on humans); 15 U.S.C.

there is nothing to indicate that Congress intended agencies to subordinate their assessment of the *actual* environmental effects of a federal action to the effects feared or perceived by some members of the public. It would surely subvert NEPA's lofty goals to shift the statute's focus away from the country's real environmental problems toward analysis of the public's emotional and psychological reactions to federal action. An agency can hardly assess the actual impact of a project by examining the general public's perceptions, nor can it rationally determine the safety of a nuclear plant on the basis of public fears, even fears so deeply felt that they result in "medically recognized" psychological distress. It is difficult to assume that Congress intended the business of the government to be carried on in such a fashion.

The majority below reached the contrary conclusion simply because, in their view, NEPA was designed to protect human health and "in the context of NEPA, health encompasses psychological health." 678 F.2d at 228 (Pet. App. 13a). The majority pointed to nothing in the text of the statute compelling that result, and the cases they cited all involved proposals, such as herbicide spraying, where the actual impact of the project itself

---

§ 278f(a)(2)(E) (Secretary of Commerce to conduct research into "psychological factors affecting human victims of fire" and into "psychological . . . characteristics of persons who engage in arson"); 29 U.S.C. § 669(a)(1) (Secretary of HEW to conduct research into "psychological factors involved" in occupational safety). No comparable expression of congressional intent appears in NEPA. In addition, none of these other statutes contemplates that psychological effects will be studied for the purpose of use in an EIS.

might cause illness or injury.[16] It is one thing to say that an agency must consider the actual health effects of a federal action. It is quite another to say that the agency must consider health effects caused by *fear* of the federal action. As Judge Wilkey made clear, "[i]t is patently obvious that this alleged effect is *entirely different* from those health effects at issue in any NEPA case relied on by the majority." *Id.* at 239 (Pet. App. 37a) (emphasis in original). He correctly saw a vast difference between assessing the actual risk of a proposal and assessing "*how people perceive and react to the risk.*" *Id.* (emphasis in original). The latter approach clearly "takes NEPA far beyond its intended purpose." *Id.*

Nor can the court of appeals' decision be justified by reference to the legislative history of NEPA. There is, to be sure, broad language in the legislative history referring to the social, esthetic, emotional, intellectual and other derivative benefits of a sound environmental policy. However, there is nothing to suggest that these goals are to be independently analyzed and evaluated in an EIS or otherwise. Rather, Congress recognized that if the actual physical environment were improved and protected, the intangible benefits to general human well-being would flow as inevitable and salutary by-products.

For example, during the Senate debates, Senator Jackson introduced into the record a report stating that the

---

[16] The cases cited by the majority are *Maryland-National Capital Park & Planning Comm'n v. United States Postal Service*, 487 F.2d 1029 (D.C. Cir. 1973) (floods); *National Organization for Reform of Marijuana Laws v. United States Department of State*, 452 F. Supp. 1226 (D.D.C. 1978) (herbicide spraying); *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F. Supp. 908 (D. Ore. 1977) (herbicide spraying). *See* 678 F.2d at 228 & n.8 (Pet. App. 13a).

purpose of NEPA is the maintenance of an environment in which life can be lived "with the fullest possible measures of personal freedom, health, and esthetic satisfaction that can be found." 115 Cong. Rec. S12,131 (daily ed. Oct. 8, 1969). Yet the report goes on to point out:

> No government is able to guarantee that these values can be realized, but government is able to assist greatly in the maintenance of an environment where such values are at least realizable.

Id. Thus, while Congress did not directly legislate an improvement in the intangible aspects of human well-being, it did take steps to protect the physical environment, thereby making man's well-being "at least realizable." Senator Jackson also introduced excerpts from a report by the Committee on Interior and Insular Affairs stating that "[n]atural beauty, increased recreational opportunity, urban esthetics and other amenities would be important *byproducts* of a national environmental policy." 115 Cong. Rec. S7818 (daily ed. July 10, 1969) (emphasis added). Again, these benefits were regarded as indirect "byproducts" of improving the physical environment.[17]

Other portions of the legislative history confirm that Congress understood NEPA to be addressed primarily to the actual physical condition of the environment. In fact, Senator Jackson described NEPA as "the most signifi-

---

[17] The same report also referred to the "crowding, congestion, and conditions within our central cities which result in civil unrest and detract from man's social and psychological well-being." 115 Cong. Rec. S7815 (daily ed. July 10, 1969). Here too, the intangible benefits are given as one reason to address the actual physical impacts on the urban environment. *See* 678 F.2d at 239 n.17 (Pet. App. 37a-38a n.17) (Wilkey, J., dissenting).

cant measure in the area of *natural resource* policy ever considered by the Congress," and he described the congressional purpose as follows:

> What is involved is a congressional declaration that we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the health of mankind. That we will not intentionally initiate actions which will do irreparable damage to the *air, land, and water which support life on earth.*

115 Cong. Rec. S7815 (daily ed. July 10, 1969) (emphasis added). Throughout its consideration of NEPA, Congress focused principally upon the perceived degradation of the physical environment such as, for example, the pollution of Lake Erie,[18] the Santa Barbara oil spills,[19] the effects of DDT,[20] deterioration of the Everglades,[21] the

---

[18] *See Environmental Quality: Hearings Before the Subcommittee on Fisheries and Wildlife Conservation of the House Committee on Merchant Marine and Fisheries*, 91st Cong., 1st Sess. 22, 152, 203, 204 (1969) (hereinafter "*House Committee Hearings*"); *National Environmental Policy: Hearings Before the Senate Committee on Interior and Insular Affairs*, 91st Cong., 1st Sess. 159 (1969) (hereinafter "*Senate Committee Hearings*"); 115 Cong. Rec. H8272-73 (daily ed. Sept. 23, 1969).

[19] *See* H.R. Rep. No. 378, 91st Cong., 1st Sess. 5 (1969); S. Rep. No. 296, 91st Cong., 1st Sess. 8 (1969); 115 Cong. Rec. S7816 (daily ed. July 10, 1969).

[20] *See House Committee Hearings* 14, 117, 122, 124, 133, 153, 177, 178, 186, 187, 188, 203, 206, 209; *Senate Committee Hearings* 60, 61, 62, 88, 101, 102, 147; H.R. Rep. No. 378, 91st Cong., 1st Sess. 15 (1969); S. Rep. No. 296, 91st Cong., 1st Sess. 8, 24 (1969).

[21] *See Senate Committee Hearings* 75; S. Rep. No. 296, 91st Cong., 1st Sess. 8 (1969).

growing number of fish kills,[22] and the development of the Alaskan oil fields.[23] While no attempt can be made here to provide an exhaustive list of the topics considered during the congressional hearings and debates, the examples cited above are indicative of the nature of the legislative concern.[24] Apart from broad language expressing the hope that human happiness, satisfaction and general well-being would flow from the new environmental policy, the legislative history centers exclusively on the need to curtail the degradation of the physical environment. Congress certainly did not address the psychological impact alleged here—which arises solely from *fears* of an undesirable physical impact. There is not the slightest indication that Congress intended federal agencies to consider such psychological impacts independently or to evaluate them directly in an EIS. The contrary result reached in the court below, as Judge Wilkey pointed out, clearly "extends the reach of NEPA far beyond its intended scope." 678 F.2d at 238 (Pet. App. 36a).

B. The Courts Have Consistently Rejected Consideration Of Public Fears Under NEPA

The question presented by this case has not been directly addressed in any of this Court's prior decisions. The lower courts, however, have decided the issue, and

---

[22] *See House Committee Hearings* 293-94; 115 Cong. Rec. H8280 (daily ed. Sept. 23, 1969).

[23] *See Senate Committee Hearings* 74-75.

[24] After reviewing the legislative history of NEPA, the Sixth Circuit concluded that the statute was "designed to protect and enhance the natural resources of the nation. . . ." *Breckinridge v. Rumsfeld*, 537 F.2d 864, 865 (6th Cir. 1976), *cert. denied*, 426 U.S. 1061 (1977).

with one exception,[25] they have consistently held that NEPA does not encompass public fears of a proposed federal action, as opposed to the actual effects of the project itself.

In *First National Bank of Chicago v. Richardson*, 484 F.2d 1369 (7th Cir. 1973), a proposed jail was attacked under NEPA, and the Seventh Circuit held that public fears and sensibilities are not cognizable under NEPA. The court acknowledged that plaintiffs' concerns were "none the less real because psychological," *id.* at 1375, but it concluded that:

> As regards public "sensibilities" aroused by criminal defendants, we question whether such factors, even if amenable to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized.

Id. at 1380 n.13. The point of the case is clear. While the actual impact of a project—such as increased crime—may be cognizable under NEPA, public fear of the impact is not.

In *Nucleus of Chicago Homeowners v. Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976), the Seventh Circuit followed the *First National Bank* case

---

[25] The exception is *City of New York v. United States Department of Transportation*, 539 F. Supp. 1237, 1273-74 (S.D.N.Y. 1982), which held that under NEPA the Department of Transportation must consider community fears of transporting radioactive material through densely populated areas, regardless how unjustified the fears may be. The case is presently on appeal to the Second Circuit. Nos. 82-6094, 82-6200.

and held that fear of low-income housing is not cognizable under NEPA:

> To the extent that this claim can be construed to mean that HUD must consider the fears of the neighbors of prospective public housing tenants, we seriously question whether such an impact is cognizable under NEPA.

524 F.2d at 231.

The Eighth Circuit has reached the same result. In *Como-Falcon Coalition, Inc. v. United States Department of Labor*, 465 F. Supp. 850 (D. Minn. 1978), plaintiff sought to enjoin the establishment of a Job Corps center in St. Paul, Minnesota. In rejecting plaintiff's assertion that an EIS was required, the district court stated:

> The impact a Job Corps center might have on the security of an urban environment is an emotionally charged issue. Members of plaintiff understandably fear an influx of disadvantaged youth in their neighborhood when reports from other Job Corps centers portend increased criminal activity. . . . The incidence of crime as an environmental impact cannot be determined by a comparison of emotional fervor. *Because plaintiff's fears, while understandable, are not based on a significant likelihood of danger to the community, the Court concludes that the Department of Labor acted reasonably in determining that the proposed Job Corps center would not appreciably affect public safety in the neighborhood.*

465 F. Supp. at 861-62 (emphasis added). On appeal, the Eighth Circuit affirmed, noting particularly that "[t]he social and economic factors raised by the Coalition's complaint are not encompassed within the provisions of NEPA . . . ." *Como-Falcon Community Coalition, Inc. v. United States Department of Labor*, 609 F.2d 342, 345 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980). Here again, the actual danger to the community was found to

be the proper subject of NEPA analysis, not the public's fear in and of itself.[26]

The Second Circuit has reached the same result for the additional reason that psychological reactions cannot be usefully quantified for NEPA purposes. In *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973), the court held that psychological reactions to a proposed jail should not be considered under NEPA:

> For the most part [plaintiffs'] opposition is based upon a psychological distaste for having a jail located so close to residential apartments, which is understandable enough. *It is doubtful whether psychological and sociological effects upon neighbors constitute the type of factors that may be considered in making such a determination since they do not lend themselves to measurement.*[10]

471 F.2d at 833 (emphasis added). The court's footnote 10 explained further:

> 10 Unlike factors such as noise, which can be related to decibels and units which measure dura-

---

[26] Similarly, a district court has held that community attitudes and fears of low-income housing need not be considered under NEPA independently of the tangible factors upon which they may be based. *Trinity Episcopal School Corp. v. Romney*, 387 F. Supp. 1044, 1078-79 (S.D.N.Y. 1974), *rev'd in part on other grounds*, 523 F.2d 88 (2d Cir. 1975). To the same effect is *Monarch Chemical Works, Inc. v. Exon*, 466 F. Supp. 639, 657 (D. Neb. 1979). In the court below, PANE cited *Chelsea Neighborhood Ass'ns v. United States Postal Service*, 516 F.2d 378 (2d Cir. 1975), as support for its position. Although there is broad language in that opinion, the decision appears to turn on the agency's failure to consider the actual incidence of crime rather than public fear in and of itself. *See* 516 F.2d at 388.

> tion, or crime, in which crime statistics are available, *psychological factors are not readily translatable into concrete measuring rods.*

Id. n.10 (emphasis added). The same rationale applies here. As the Licensing Board itself found, the psychological effects alleged by PANE cannot be meaningfully quantified and weighed in a NEPA cost/benefit analysis.[27]

The foregoing cases reflect a broad judicial consensus that NEPA is and should be concerned with the actual physical impacts of a federal project, not with individuals' fears, perceptions and psychological reactions to the project. The court of appeals departed from this consensus on the ground that the prior cases involved "socioeconomic anxieties" resulting from "people pollution," and not "medically recognized impairment of . . . psychological health" resulting from fears of "the holocaust potential of an errant nuclear reactor." 678 F.2d at 229, 230 (Pet. App. 15a, 16a). The apparent premise of the majority's distinction is that nuclear power is a special case capable of engendering fear and distress that is somehow different for NEPA purposes from fear and distress caused by other factors, such as urban crime or mining disasters. As Judge Wilkey demonstrated, the distinction is "obviously unsupportable" and indeed is "destroyed by the major-

---

[27] A different panel of the District of Columbia Circuit has relied on *Hanly* to hold that some questions of esthetics do not lend themselves to NEPA analysis because "[l]ike psychological factors they 'are not readily translatable into concrete measuring rods.'" *Maryland-National Capital Park & Planning Comm'n v. United States Postal Service*, 487 F.2d 1029, 1038 (D.C. Cir. 1973), *quoting Hanly v. Kleindienst*, *supra*, 471 F.2d at 833 n.10. The problems of quantification and measurement are discussed further in the next section of this brief.

ity's own finding that it is a 'simple fact that effects on psychological health are effects on the health of human beings.' " 678 F.2d at 241 (Pet. App. 41a, 42a). Whether the source is urban crime or nuclear power, we are dealing with public fears and anxieties. If NEPA applies in one case, it must in all. *Id.* (Pet. App. 42a).

There is no basis in law or logic for distinguishing the present case from the prior cases holding that psychological distress is not cognizable under NEPA. The court of appeals should not have been so quick to cast aside the accumulated wisdom and experience of the other courts that have considered this issue.

C. Recognition Of Psychological Stress As An Environmental Impact Will Distort The NEPA Process And Promote Irrational Decision Making

Enthusiasts and critics alike have described NEPA as the Magna Carta of the environmental movement.[28] Whether the relevant environment is rural or urban, those charged with satisfying NEPA's mandate have been required to take a "hard look" at the actual environmental impacts of a proposed federal action, *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976), and to weigh those costs against the benefits to be derived from the project. *See* 42 U.S.C. §§ 4331(b)(5), 4332(2)(C). By requiring agencies publicly to take environmental ameni-

---

[28] *See* Liroff, *NEPA Litigation in the 1970s: A Deluge or a Dribble?*, 21 Nat. Resources J. 315, 316 (1981); Murphy, *The National Environmental Policy Act and the Licensing Process: Environmentalist Magna Carta or Agency Coup de Grace?*, 72 Colum. L. Rev. 963 (1972). This Court similarly described NEPA as "one of the recent major federal efforts at reversing the deterioration of the country's environment." *United States v. SCRAP*, 412 U.S. 669, 693 (1973).

ties into account in the course of decision making, in addition to economic and technical considerations, Congress hoped that productive and enjoyable harmony between man and his environment would be maintained for this and future generations. 42 U.S.C. § 4321; *Andrus v. Sierra Club*, 442 U.S. 347, 350-51 (1979).[29]

Necessarily implicit in the lower court's decision to require consideration of public fears of TMI-1 is a determination that this additional analysis will contribute to NEPA's stated goal of creating and maintaining conditions under which man and nature can exist in productive harmony. 42 U.S.C. § 4331(a). But this is clearly not the case. In fact, the introduction of this perceived risk or fear factor into the NEPA balancing process necessarily will distort that process and devalue the environmental assets the Act was created to promote and protect.

Whenever a new factor is added to any balancing process, the relative weight and importance of the other factors is necessarily diminished. Consideration of psychological stress will inevitably dilute the emphasis traditionally placed on the air, land, water and other actual environmental assets that NEPA was indisputably intended to protect. *See* 115 Cong. Rec. S7815 (daily ed. July 10, 1969) (statement by Senator Jackson). In some cases, the traditional emphasis could be so diluted that the ultimate decision would be skewed away from the most environmentally benign alternative. For example, in licensing new plants the NRC customarily implements

---

[29] In selecting a course of action, however, an agency need not elevate environmental concerns over other appropriate considerations. *Strycker's Bay Neighborhood Council v. Karlen*, 444 U.S. 223, 227-28 (1980).

NEPA by comparing the environmental effects of nuclear power with alternative energy sources. If psychological stress must be considered as an "environmental cost," it might tip the balance toward a coal-fired plant or some other alternative that actually produces a more harmful impact on the natural environment. Thus public fears and anxieties, however unjustified, could be used to transform NEPA into a vehicle for promoting the least environmentally desirable alternative.

By the same token, consideration of psychological stress could tip the balance against proceeding at all with a project the agency found to be environmentally benign. In the present case, for instance, PANE asserts that because of psychological stress TMI-1 can *never* be operated.[30] It hardly serves NEPA's purposes to hinder or block federal actions that are determined to have no actual environmental impacts of any significance.

In addition, consideration of psychological stress will divert agency resources away from assessment and protection of the traditional environmental assets that NEPA was designed to preserve.[31] The diversion of re-

---

[30] This is implicit in the last sentence of PANE's Contention No. 1, which states that the distress makes it "impossible" to operate TMI-1. (Pet. App. 115a). *See also* PANE Opposition to Public Utilities' Motion to Expedite Consideration, at 2, filed in the court of appeals on Feb. 23, 1981 (psychological distress should be considered "so that the reactors can be properly decommissioned").

[31] The extent of agency resources that would be diverted from other uses is well illustrated in this case. As of May 13, 1982, the NRC had spent more than $400,000 on its effort, since the court's January 7, 1982 initial Judgment, to assess psychological stress. Yet the NRC still was not in a position to make the threshold determination concerning the "significance" of the alleged psychological distress. *See* Request of Respondent NRC for Expeditious Issuance of the Court's Opinions, filed with the court of appeals on May 13, 1982.

sources is by no means limited to the NRC. Other agencies will be faced with psychological stress contentions in the context of missile sites, toxic chemical facilities, prisons, major highways, public housing projects, and other programs that may be beneficial to the Nation as a whole, but are subject to the "not-in-my-backyard" syndrome. Even if psychological stress can be dismissed as insignificant in some of these instances, the agencies will still have to expend the time, money and effort to determine the significance of the alleged impact. And the resulting litigation is likely to be endless.[22]

In his majority opinion on psychological stress under the Atomic Energy Act, Judge Wilkey focused on the unfortunate shift in resource allocation that might result from requiring the NRC to direct its attention to psychological reactions to nuclear power. He concluded that instead of ensuring the technical safety of operating reactors, as it is presently technically staffed to do, the NRC would be required to develop stress expertise which, inevitably, would result in a reduced ability to attend to the safety issues at hand. 678 F.2d at 252 (Pet. App.

---

[22] For example, intervenors around the country began raising psychological stress contentions in NRC licensing cases immediately after the lower court's decision. *See* Public Utilities' petition for certiorari, at 9-10 & n.11; 678 F.2d at 248-49 (Pet. App. 57a-59a). The NRC attempted to stem this flow of cases with a Statement of Policy on psychological stress contentions. 47 Fed. Reg. 31,762 (July 22, 1982). The Statement of Policy is now under attack in the Sixth Circuit. *Sunflower Alliance, Inc. v. NRC*, No. 82-3563 (6th Cir., filed Sept. 13, 1982).

66a).[33] If, as Judge Wright stated eleven years ago, NEPA requires "consideration 'appropriate' to the problem of protecting our threatened environment, not consideration 'appropriate' to the whims, habits or other particular concerns of federal agencies," *Calvert Cliffs' Coordinating Committee v. AEC*, 449 F.2d 1109, 1113 n.8 (D.C. Cir. 1971), surely it also requires that agencies not "downplay environmental factors" in the pursuit of "whims, habits or other particular concerns" of those psychologically affected by what they mistakenly perceive to be the costs or risks associated with proposed government action. *Id.*

In addition to detracting from the appropriate emphasis given by agencies to the physical environment, the transformation of psychological stress into a NEPA environmental impact is tantamount to legally mandated irrational decision making. Insofar as fears and perceptions coincide with reality, the public concern will be satisfied by consideration of the actual impacts. However, if perceptions are wrong or irrational, they can be factored into the NEPA decision-making process only at the risk of producing irrational agency decisions. Congress cannot have intended to sanction irrational decisions by the administrative agencies it created to deal with the Nation's difficult problems. Moreover, as Commissioner Hendrie stated, any such approach assumes that the public is incapable of responding intelligently to factual information and would "mean treating the Amer-

---

[33] The majority below apparently overlooked Judge Leventhal's pragmatic observation that courts applying NEPA must realize "that the resources of energy and research—and time—available to meet the Nation's needs are not infinite." *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972).

ican public with patronizing condescension." (Pet. App. 90a). By catering to irrationality on the part of a portion of the public, resources of the agency would be diverted from "the task of assuring nuclear safety" to "fruitless speculation about means of mollifying irrational fears." *Id.* Ultimately, this interpretation of NEPA would require agencies to override sound technical judgments, congressionally determined to be in the Nation's best interest, because of irrational, albeit genuine, fears and anxieties. Notwithstanding the broad mandate of NEPA, such irrational decision making ought not to be sanctioned as within the Act's bounds. NEPA was not intended to impose on federal agencies this "through-the-looking-glass" approach to administrative decision making.

There are other, very practical reasons for not evaluating the psychological distress engendered by people's perceptions about every major federal action on which government agencies embark. Psychological distress is a totally subjective phenomenon that necessarily varies from individual to individual. Its subjectivity stems not only from its unique and synergistic relationship to all of the events each individual has experienced in his or her lifetime, but also from the manner in which each individual has mentally processed or synthesized those experiences. Perhaps this is what the Second Circuit was referring to in its observation that "psychological factors are not readily translatable into concrete measuring rods." *Hanly v. Kleindienst*, *supra*, 471 F.2d at 833 n.10. Commissioner Hendrie also focused on this problem when he observed that the "problems of quantification and proof would be such as to make rational factfinding extremely difficult, as licensing boards and the Commission struggled to decide between the largely unprovable assertions of opposing sets of expert witnesses." (Pet. App. 89a).

The difficulty in measuring the stress of *proposed* actions is further compounded in this case by the wholly predictive nature of the inquiry.[34] In this case, not only would the NRC have to evaluate the residual psychological stress produced by the TMI-2 accident, but it would have to distinguish that residual stress, which is not at issue here, from the increment of stress caused by the restart of TMI-1. Prediction becomes all the more difficult because the stress need not be grounded on reality. At TMI, for instance, we now know that individuals' fears at the time of the TMI-2 accident were based largely on misinformation about an allegedly explosive hydrogen bubble and supposedly high levels of radiation released from the plant—issues of fact that subsequently were proven false. *Report of the President's Commission* at 13, 18, 126 (J.A. 89-90, 97-98, 102-03).

In addition to attempting to establish a causal link between a proposed action, on the one hand, and psychological effects, on the other, the agency would be required to engage in wholesale speculation about individuals' future sensibilities. For example, if people in the area were experiencing severe financial conditions during the time of the restart, these conditions might greatly influence their reaction to the restart—an eventuality that the agency could not possibly take into account in its analysis. Nevertheless, the agency would be required to guess what level of stress will occur. Such a highly speculative

---

[34] Judge Wilkey recognized the problem of predicting stress, noting that while PANE "makes much of the practice of courts in measuring psychological injury," such a retrospective analysis, in which monetary damages are assessed for purposes of liability, is "of dubious value" here. 678 F.2d at 240. (Pet. App. 40a).

exercise in prophecy cannot reasonably be within the bounds of NEPA. *See Scientists' Institute for Public Information v. AEC*, 481 F.2d 1079, 1092-93 (D.C. Cir. 1973); *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974).[35]

Furthermore, not only would stress have to be measured, but it also would have to be factored into the NEPA cost/benefit analysis. An agency therefore would have to place a value on mental sensibilities. This additional, extraordinarily subjective judgment requires the agency to assign various weights to individuals' multitudinous views about and reactions to embarking, or not embarking, upon a proposed federal action. Presumably, an agency would be required to determine which feelings were significant and which were not, and to decide whether the significance placed on psychological reactions in a NEPA analysis should be based on the strength of the feeling, the perceived justification for it, or some other criterion.[36]

---

[35] The Licensing Board also questioned whether the state of the art could produce evidence on prospective stress which would be useful in a NEPA cost/benefit analysis. 11 N.R.C. at 305 (J.A. 40-41). Nevertheless, it thought that NEPA permitted the agency to evaluate stress for the purpose of reducing the causes of stress. *Id.* at 299 (J.A. 31-32). It is difficult to understand how an adjudicatory board could ameliorate fear that is unrelated to any actual safety hazard. As Commissioner Hendrie observed, "[t]here is no way to allay that fear except not to build or operate the reactor." (Pet. App. 82a).

[36] Judge Leventhal addressed the difficulty in making these kinds of judgments in *Maryland-National Capital Park & Planning Comm'n v. United States Postal Service*, *supra*, in the context of certain esthetic effects. In considering whether Congress intended agencies to consider whether, for example, a particular building was beautiful, Judge Leventhal concluded that "as a matter of reasonable

In order to comply with the court of appeals' novel interpretation of NEPA, an agency would have to spend its resources developing and interpreting psychological profiles of a reasonable cross-section of the affected community and, in all likelihood, a control group community. Whether through the use of detailed questionnaires or one-on-one interviews, this complex and time-consuming process would significantly intrude into the personal lives of many people who would not have invited such inquiries.[37] It is doubtful that Congress intended that NEPA be used to accomplish a task that invades individual privacy without any assurance that its surveys could produce meaningful answers.

In summary, as Judge Wilkey observed, the problem with measuring the psychological stress that will be produced by restart of TMI-1 is that "it is not subject to *measurement* at all. Instead, the Commission will be forced to *predict* how every individual in the TMI area will react to the restart." 678 F.2d at 240 (Pet. App. 40a-41a) (emphasis in original). As he stated, Congress

---

construction of NEPA," the required "substantial inquiry" or "hard look" does not apply "where the claim of NEPA application is focused on alleged esthetic impact and the matters at hand pertain essentially to issues of individual and potentially diverse tastes." 487 F.2d at 1038-39. Judge Wilkey also touched upon this issue in challenging the majority's distinction between "real," "justifiable" fears and "social," "economic" or "political" fears. 678 F.2d at 242 (Pet. App. 44a).

[37] In its Preliminary Plan for Presentation of Evidence on Psychological Distress, PANE advised the Licensing Board that its evidence would include "thorough psychological evaluation through both standardized testing and intense individual interviews." (J.A. 27).

did not intend NEPA to encompass such a "particularly ephemeral," "speculative" and "entirely subjective" inquiry. *Id.*

In the final analysis, the question at the heart of this case is whether treating psychological stress as a health effect cognizable under NEPA furthers the goals the Act was intended to promote and the values it was designed to protect. There are several reasons why it does not. Whether couched in terms of the speculativeness of such a wholly predictive inquiry,[38] the difficulty in measuring future stress,[39] or the inappropriateness of evaluating stress *per se* in contrast to the underlying environmental causes,[40] the result is the same. The linchpin of all of these analyses is that they place appropriate limits on the scope of NEPA. These limits should not be swept aside to accommodate psychological stress as a "new" environmental impact, consideration of which must be included in government decision making. The lower court disregarded these limits. Instead, because the TMI-2 accident was "the most publicized nuclear accident of our time," and because "the people of the nation as a whole" are for some reason "entitled" to NEPA consideration of this case, the court declared that NEPA was meant to

---

[38] *See* 678 F.2d at 240 (Pet. App. 40a). *See also Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 838 (D.C. Cir. 1972).

[39] As the Second Circuit cogently stated, "psychological factors are not readily translatable into concrete measuring rods." *Hanly v. Kleindienst*, 471 F.2d 823, 833 n.10 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973); *see also* 678 F.2d at 240-41 (Pet. App. 40a-41a).

[40] Judge Wilkey found it "hard to believe that Congress intended NEPA to force agencies to consider psychological reactions to risks apart from the actual level of the risks themselves." 678 F.2d at 243 n.40 (Pet. App. 47a n.40).

apply "especially" to decisions "of this importance." *See* 678 F.2d at 253 (Pet. App. 67a) (Wilkey, J., dissenting).

This sort of reasoning is reminiscent of *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978), in which the Court struck down the lower court's effort to fashion what it believed were the "best" procedures, "most likely to further some vague, undefined public good," in lieu of deferring to the NRC's choice of procedures for satisfying the mandate of NEPA and the requirements of the Administrative Procedure Act. 435 U.S. at 549. In the words of Justice Rehnquist, writing for the Court, the circuit court's "Monday morning quarterbacking" was an "unwarranted" intrusion into the administrative process, and represented "judicial intervention run riot." *Id.* at 547, 548, 557. An important lesson of *Vermont Yankee*, and perhaps the ultimate issue presented by the case,[41] is the proper role of the courts in the political debate over nuclear energy as a source of electricity. The Court's prescription on this subject could not have been plainer:

> Nuclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try nuclear energy, establishing a reasonable review process in which courts are only to play a limited role. The fundamental policy questions appropriately resolved in Congress and in the state legislatures are *not* subject to reexamination in the federal courts under the guise of judicial review of agency action.

Id. at 557-58 (emphasis in original).

---

[41] *See* Breyer, *Vermont Yankee and the Courts' Role in the Nuclear Energy Controversy*, 91 Harv. L. Rev. 1833, 1845 (1978).

As a result of this Court's admonition in *Vermont Yankee*, the court of appeals was stymied in its effort to supplant the NRC's administrative procedures with procedures that produce results more to its own liking. In the present controversy, the court of appeals once again has embarked on a tack which, although seemingly less direct, is aimed even more pointedly than its interventionism in *Vermont Yankee* at utilizing NEPA as a tool to undermine the Nation's nuclear policy, with which the court evidently disagrees. Speaking for the majority, Judge Wright simply could not "believe" that the psychological aftermath of the TMI-2 accident falls outside "the broad scope" of NEPA, because this case, he thinks, presents "the holocaust potential of an errant nuclear reactor." 678 F.2d at 229, 230 (Pet. App. 15a, 17a).[42] But administrative decisions may not be set aside simply because of judicial unhappiness with the result otherwise reached. *See Vermont Yankee, supra*, 435 U.S. at 558.

Whatever the view of the lower court about the "holocaust potential" of nuclear power, it may *not* use the guise of judicial review to question policy issues resolved by the Congress. Yet the clear implication of the decision below is that the NRC could not license a plant otherwise found safe if some local residents have conceived a fear and distrust of nuclear power that is sufficiently severe and intense. As Judge Wilkey pointed out, this would sub-

---

[42] As Judge Wilkey stated, "[a]t the heart of the majority view is a belief that nuclear power and its attendant risks must be judged under some special standard." 678 F.2d at 253 (Pet. App. 68a). In his view, this value judgment "represents a blindness toward the larger picture"—the risks inherent in any sort of energy production activity. *Id.*

ordinate the scientific judgment of the NRC to the "*views of the population itself on the very desirability of the activity* . . . ." 678 F.2d at 239 (Pet. App. 37a, 38a) (emphasis in original). Thus NEPA would be transformed into a device through which residents' fear of nuclear power could be used to nullify the congressional determination "to at least try nuclear energy."

Contrary to Judge Wright's assertion, the court's analysis has little to do with "the protections Congress provided in the National Environmental Policy Act." 678 F.2d at 235 (Pet. App. 28a). Rather, its decision is a "novel hurdle, well designed to delay the development of nuclear power (contrary to the national policy determined by Congress and the Executive)," and is "thoroughly consistent" with the lower court's "track record of using NEPA to delay the development of important energy sources." *Id.* at 237-38 (Pet. App. 34a) (Wilkey, J., dissenting).[43]

---

[43] Judge Wilkey referred also to the lower court's recent decision in *Natural Resources Defense Council, Inc. v. NRC*, 685 F.2d 459 (D.C. Cir. 1982), *cert. granted*, 51 U.S.L.W. 3419 (U.S. Nov. 29, 1982) (Nos. 82-524, 82-545, 82-551). In Judge Wilkey's view, the combined effect of that case and the present one is that the court of appeals "has effectively taken over control of the nuclear industry." 678 F.2d at 238 (Pet. App. 34a).

CONCLUSION

The Amended Judgment of the court of appeals should be reversed, and the case should be remanded with instructions to deny PANE's Petition For Review.

Respectfully submitted,

JAMES B. HAMLIN
Counsel of Record

GEORGE F. TROWBRIDGE
JOHN B. RHINELANDER
DEBORAH B. BAUSER
SHAW, PITTMAN, POTTS & TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Attorneys for Petitioners
Metropolitan Edison Company, et al.

Of Counsel:
JAMES B. LIBERMAN
DEBEVOISE & LIBERMAN
26 Broadway
New York, N.Y. 10004
(212) 248-6900

December 16, 1982

Office-Supreme Court, U.S.
FILED
1983
ALEXANDER L. STEVAS,
CLERK

No. 81-2399
No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to The United States Court of Appeals for The District of Columbia Circuit

BRIEF FOR RESPONDENT PEOPLE AGAINST NUCLEAR ENERGY

WILLIAM S. JORDAN, III
Counsel of Record

LEE L. BISHOP
DIANE CURRAN
GAIL M. HARMON
HARMON & WEISS
1725 I Street, N.W.
Suite 506
Washington, D.C. 20006
(202) 833-9070

Attorneys for Respondent

January 29, 1983

QUESTION PRESENTED

Whether the National Environmental Policy Act of 1969 requires the Nuclear Regulatory Commission to consider the impact of reopening Three Mile Island Unit No. 1 on the psychological health of surrounding residents where (1) the impact is alleged to involve medically recognized damage to human psychological health in an area where such damage has already occurred as a result of the accident at Three Mile Island Unit No. 2, (2) the health damage would be directly caused by the alteration of the human environment of the area by the restart of Unit 1, and (3) the health damage is directly related to the potential for physical harm from a nuclear accident should the restart of Unit No. 1 be allowed.

TABLE OF CONTENTS

	Page
QUESTION PRESENTED	i
TABLE OF CONTENTS	iii
TABLE OF AUTHORITIES	v
OPINIONS BELOW	1
JURISDICTION	2
STATUTE INVOLVED	2
STATEMENT	2
SUMMARY OF ARGUMENT	10
ARGUMENT	14
I. Section 102(2)(C) of NEPA Requires the Commission to Evaluate and Consider the Psychological Health Damage that PANE Has Alleged Will Be Caused by the Restart of TMI-1....	15
A. Protection of human health is the primary concern of NEPA.	15
B. NEPA's protection of human health encompasses human psychological health..	17
C. The Commission must consider the environmentally related health damage that will be caused by the restart of TMI-1.	22
1. The restart of TMI-1 will create an environment that damages human health.	22
2. The human psychological health damage that will be caused at Three Mile Island is directly related to harm to the physical and natural environment	30
3. The measurability of psychological health damage is an issue for determination by the agency based on a factual record	33

Page

II. NEPA's Inherent Statutory Limitations and the Breadth of Agency Discretion in its Implementation Assure No Unduly Broad or Burdensome Application of the Decision Below 37

A. The threshold requirement for significant environmental effects inherently limits the application of section 102(2)(C) of NEPA. 37

B. NEPA's fundamentally procedural mandate minimizes any burden of implementation 40

C. The narrow scope of the decision below and the breadth of agency discretion minimize the burden of considering psychological health damage allegations in other situations 42

CONCLUSION 45

TABLE OF AUTHORITIES

	Page
CASES:	
Andrus v. Sierra Club, 442 U.S. 347 (1979)	23
Breckinridge v. Rumsfeld, 537 F.2d 864 (6th Cir. 1976), *cert. denied*, 429 U.S. 1061 (1977)	29
Carolina Environmental Study Group v. United States, 510 F.2d 796 (D.C. Cir. 1975)	41
Chelsea Neighborhood Associations v. United States Postal Service, 516 F.2d 378 (2d Cir. 1975)	19,24, 27,34
Citizens Against Toxic Sprays, Inc. v. Bergland, 428 F. Supp. 908 (D. Or. 1977)	17
Citizens Committee Against Interstate Route 675 v. Lewis, 542 F. Supp. 496 (S.D. Ohio 1982)	29
City of New York v. United States Department of Transportation, 539 F. Supp. 1237 (S.D.N.Y. 1982)	33
Como-Falcon Community Coalition, Inc. v. United States Department of Labor, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980)	28,29
Concerned About Trident v. Rumsfeld, 555 F.2d 817 (D.C. Cir. 1977)	31
County of Suffolk v. Secretary of Interior, 562 F.2d 1368 (2d Cir. 1977), *cert. denied*, 434 U.S. 1064 (1978)	34
Defenders of Wildlife v. Andrus, 627 F.2d 1238 (D.C. Cir. 1980)	39
Diamond v. Chakrabarty, 447 U.S. 303 (1980)	18
Doe v. Bolton, 410 U.S. 179 (1973)	17,18
Environmental Defense Fund v. Environmental Protection Agency, 489 F.2d 1247 (D.C. Cir. 1973)	39
First National Bank of Chicago v. Richardson, 484 F.2d 1369 (7th Cir. 1973)	27,34,39
Goodman Group, Inc. v. Dishroom, 679 F.2d 182 (9th Cir. 1982)	29
Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973)	27,28,34
Hanly v. Mitchell, 460 F.2d 640 (2d Cir.), *cert. denied*, 409 U.S. 990 (1972)	27

	Page
Image of Greater San Antonio, Texas v. Brown, 570 F.2d 517 (5th Cir. 1978)	29
Kleppe v. Sierra Club, 427 U.S. 390 (1976)	34,35
Maryland-National Capital Park and Planning Commission v. United States Postal Service, 487 F.2d 1029 (D.C. Cir. 1973)	26,28,34
Metlakatla Indian Community v. Adams, 427 F. Supp. 871 (D.D.C. 1977)	29
National Association of Government Employees v. Rumsfeld, 413 F. Supp. 1224 (D.D.C. 1976), *aff'd*, 556 F.2d 76 (1977)	29
National Helium Corp. v. Morton, 486 F.2d 995 (10th Cir. 1973)	41
New Hampshire v. Atomic Energy Commission, 406 F.2d 170 (1st Cir.), *cert. denied*, 395 U.S. 962 (1969)	18
Nucleus of Chicago Homeowners Association v. Lynn, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976)	28,29
Philbrook v. Glodgett, 421 U.S. 707 (1975)	26,39
Robinson v. Knebel, 550 F.2d 422 (8th Cir. 1977)	36
Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission, 481 F.2d 1079 (D.C. Cir. 1973)	31,35
State of Minnesota v. Nuclear Regulatory Commission, 602 F.2d 412 (D.C. Cir. 1979)	43
Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980)	40
Trinity Episcopal School Corp. v. Romney, 523 F.2d 88 (2d Cir. 1975)	28
United States v. Students Challenging Regulatory Agency Procedures (SCRAP), 412 U.S. 669 (1973)	14
United States v. Vuitch, 402 U.S. 62 (1971)	17,18
Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, 435 U.S. 519 (1978)	*passim*

Page

ADMINISTRATIVE DECISIONS:

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 2), LBP-77-70, 6 N.R.C. 1185 (1977) 4

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), CLI-79-8, 10 N.R.C. 141 (1979) 3,33

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289 (Restart) (Memorandum and Order Ruling on Petitions and Setting Special Prehearing Conference) (filed Sept. 24, 1979) 6

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289 (Restart) (Memorandum and Order on Motions to Modify) (filed Oct. 17, 1979) 6

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), LBP-80-8, 11 N.R.C. 297 (1980) 6,29,32 36

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-39, 12 N.R.C. 607 (1980) 5,7,40

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), CLI-81-20, 14 N.R.C. 593 (1981) 7

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289, ALAB-708 (Design Issues) (Memorandum and Order) (filed Dec. 29, 1982) 9

Internal Revenue Code of 1954, 26 U.S.C. § 1 et seq.

I.R.C. § 105(a) (1976) 18

I.R.C. § 213 (1976) 18

National Environmental Policy Act of 1969, 42 U.S.C. § 4321 et seq.

Section 2, 42 U.S.C. § 4321 15,23

Section 101(b), 42 U.S.C. § 4331(b) 15,16

Section 101(c), 42 U.S.C. § 4331(c) 16

Section 102 (2)(A), 42 U.S.C. §4332 (2)(A) 19

	Page
Section 102 (2)(B), 42 U.S.C. § 4332 (2)(B)	36
Section 102 (2)(C), 42 U.S.C. § 4332 (2)(C)	*passim*
Section 102 (2)(C)(i), 42 U.S.C § 4332 (2)(C)(i)	22
Section 102 (2)(C)(ii), 42 U.S.C. § 4332 (2)(C)(iii)	22
10 C.F.R. § 2.714(b) (1982)	6
10 C.F.R. § 51.23 (c) (1982)	31
21 C.F.R. Part 25 (1982)	38
21 C.F.R. § 25.1(f)(1) (1982)	38
40 C.F.R. § 1501.4 (1982)	41
40 C.F.R. § 1501.4 (c)(1982)	22
40 C.F.R. § 1501.4(c) (1982)	22
40 C.F.R. Part 1508 (1982)	
Section 1508.8(b)	17,20
Section 1508.9	22
Section 1508.14	23
Section 1508.27(b)	17
Section 1508.27(b)(2)	17
Section 1508.27(b)(4)	33
Treas. Reg. § 1.213-1(e)(1)(ii) (1982)	18
Treas. Reg. § 7.105-2(d) (1982)	18
LEGISLATIVE MATERIALS:	
115 Cong. Rec. (1969):	
p. 3698	19,25
p. 3699	25
p. 3700	25
p. 3702	16,25
p. 3703	19
p. 3704	19
p. 19,009	16
p. 29,067	18
S. Rep. No. 296, 91st Cong., 1st Sess. (1969)	18,25,39

Page

MISCELLANEOUS:

44 Fed. Reg. 40,461 (1979) 2
45 Fed. Reg. 40,101 (1980) 4,23,32
47 Fed. Reg. 31,762 (1982) 42,43
American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (3d ed. 1980) 21,30,36
A. Baum, R. Gatchel, R. Fleming, and C. Lake, Chronic and Acute Stress Associated with the Three Mile Island Accident and Decontamination: Preliminary Findings of a Longitudinal Study (1981) 5
E. Bromet, Three Mile Island: Mental Health Findings (1980) 5
Comment, *Negligently Inflicted Mental Distress: The Case for An Independent Tort*, 59 Geo. L. J. 1237 (1971) 36
Comment, *Neurosis Following Trauma: A Dark Horse in the Field of Mental Disturbance*, 8 Cum. L. Rev. 495 (1977) 36
R. Holt, Ph.D., A Selective Review of Research on Health Effects of the Accident at Three Mile Island (filed with the Commission by letter of May 12, 1982) 36
P. Houts, R. Miller, G. Tokuhata, and K. Ham, Health Related Behavioral Impact of the Three Mile Island Nuclear Incident, pt. 2 (1980) 5
3 Oxford English Dictionary (1933) 26
Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI (1979) 2,4,5, 31
1 Rogovin, *Three Mile Island—A Report to the Commissioners and to the Public* (1980) 5
Letter from John Shea, III, Counsel to CEQ, to Donald E. Hossler (Feb. 14, 1980) 21
J. L. Titchener, M.D., Report of the University of Cincinnati Study of Psychological Impact and Long-Term Consequences of the Accident at Three Mile Island (filed with the Commission by letter of May 12, 1982) 36

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to The United States Court of Appeals for The District of Columbia Circui.

BRIEF FOR RESPONDENT PEOPLE AGAINST NUCLEAR ENERGY

OPINIONS BELOW

The opinions and judgment of the court of appeals are reported at 678 F.2d 222.[1] They are reproduced in Appendix A to the petition in No. 81-2399, as are all pertinent orders and opinions of the Nuclear Regulatory Commission.[2]

[1] All of the parties to the decision below are identified in the captions to this brief.

[2] We will refer to the Appendix to the petition in No. 81-2399 as "Pet. App."

JURISDICTION

The grounds for jurisdiction are adequately stated by the petitioners.

STATUTE INVOLVED

Sections 2, 101, 102 of the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321, 4331, and 4332 (1976), are reproduced in Appendix A to this brief.

STATEMENT

1. On March 28, 1979, Unit No. 2 of the Three Mile Island nuclear power plant ("TMI-2") suffered a serious nuclear accident, described by the President's Commission on the Accident at Three Mile Island as "the worst crisis yet experienced by the nation's nuclear power industry."[3] Three Mile Island Unit No. 1 ("TMI-1") shares the same site with Unit No. 2, but was not involved in the accident. By coincidence, it was not in operation when the accident occurred.

As a result of the accident at TMI-2, the Nuclear Regulatory Commission ("NRC" or "Commission") determined that it

> lack[ed] the requisite reasonable assurance that the same licensee's Three Mile Island Unit No. 1 facility, a nuclear power reactor of the same design, can be operated without endangering the health and safety of the public.[4]

Accordingly, the Commission directed that TMI-1 remain shut down pending further order.

---

[3] *Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI* 35 (1979) (Joint Appendix 90. We will refer to the Joint Appendix as "J.A."). [Hereinafter cited as *President's Commission Report*].

[4] 44 Fed. Reg. 40,461 (1979) (J.A. 8).

The Commission further directed that a public hearing be held prior to the restart of TMI-1, and it detailed the issues to be addressed in the hearing. Among these issues was the need for and sufficiency of a number of "short-term" technical actions that the Commission proposed to require as a prerequisite to the restart of TMI-1.[5] In addition to its technical concerns, the Commission invited briefs on the question of whether psychological damage related to the Unit 2 accident could be legally relevant to the proceeding.[6]

2. People Against Nuclear Energy ("PANE"), respondent in both of these dockets, was formed in the months following the accident by local residents living within five miles of Three Mile Island. Its members are primarily working people and their families, most of whom have lived in the area for many years, some for generations. Before the accident, most PANE members had no particular views about nuclear power; few, if any, opposed the original licensing of either reactor at Three Mile Island.[7]

The accident at TMI-2 profoundly changed the lives of PANE's members and their neighbors. Where they had previously been secure in their families, homes, and neighborhoods, many, including children, began to suffer symptoms of psychological health damage. These symptoms included preoccupation with the accident and its hazards, increased tension, an intense feeling of personal helplessness and vulnerability, and unexplainable physical symptoms such as skin rashes, aggravated ulcers, and skeletal and muscular problems. As a result, PANE intervened in the restart hearing, raising its primary concern—that restart of TMI-1 would perpetuate the psychological health damage originally caused by the accident at Unit 2 and cause further impairment of psychological health

---

[5] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI 79-8, 10 N.R.C. 141, 144-45, 148 (1979) (J.A. 9, 13-15, 19).

[6] *Id.* at 148 (J.A. 20).

[7] For these reasons, the name "People Against Nuclear Energy" is a misnomer. PANE was formed out of a concern about the Three Mile Island area, not about nuclear power in general.

such that recovery from the effects of the accident would become impossible.[8]

3. The accident at Unit 2 was completely unexpected. It occurred only three months after the reactor had entered commercial operation, despite extensive safety reviews and hearings before the Commission's Atomic Safety and Licensing Board.[9]

The accident involved a series of events that the designers of the plant had not anticipated. Commission licensing requirements at the time reflected the view that this sort of accident, said to be beyond the "design basis" for the reactor, was so unlikely that there was no need to consider its potential consequences in deciding whether the reactor should be licensed. 45 Fed. Reg. 40,101-02 (1980). During the first several days of the accident, when public information was incomplete and confusing, neither the Utilities nor the Commission clearly understood the severity of the accident. By Friday, March 30, 1979, two days after the accident began, the Governor of Pennyslvania believed the threat to public health and safety to be sufficiently grave to urge an immediate evacuation of pregnant women and preschool children living within five miles of the reactor. Tens of thousands of surrounding residents left the area.[10]

According to the President's Commission, the accident got sufficiently out of hand "that those attempting to control it were operating somewhat in the dark."[11] The President's Commission concluded that the accident pushed expert knowledge beyond the understood to the "experimental," creating an

---

[8] PANE's contentions are set out at Pet. App. 115a-116a. The first contention, which specifically alleges psychological health damage as a result of restart, is the focus of this case. It is reproduced in Appendix B to this brief. The second contention, which alleges community deterioration, is not at issue in this case. The court below held that it represented a classic socioeconomic issue and, as such, does not trigger the EIS requirement in itself, but must be considered if an EIS is prepared. (Pet. App. 17a-18a).

[9] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 2), LBP-77-70, 6 N.R.C. 1185, 1186-87, 1228-31 (1977).

[10] *President's Commission Report, supra* note 3, at 13, 15 (J.A. 90, 93).

[11] *Id.* at 15 (J.A. 93).

unacceptably high level of uncertainty that the "accident could result in major releases of radioactivity."[12] Fortunately, although there was massive damage to the radioactive core of the reactor, a disaster with extensive radiation exposure was averted.[13] The President's Commission concluded that "the most serious health effect of the accident was severe mental stress, which was short lived."[14]

4. The regulations of the Nuclear Regulatory Commission provide that contentions proffered by an intervenor such as

---

[12] *Id.*

[13] *Id.* Petitioners Metropolitan Edison Co., et al., ("Utilities") suggest at page 14 of their brief that the psychological health damage caused by the accident resulted largely from misinformation about radiation levels and the danger of a hydrogen explosion. According to their reasoning, psychological health damage here is inconsistent with reality because it resulted from perceptions of danger that did not, in fact, exist. NRC Commissioner Bradford pointed out that, to the contrary, many mistakes in the assessment of the TMI-2 accident resulted in public statements that were unduly reassuring. For example, during the early stages of the accident when all assessments and statements were optimistic, the reactor core was partially uncovered for several hours. Commissioner Bradford concluded that there was a real danger during the accident and that psychological stress reactions "cannot be dismissed as irrational or unrelated to radiation hazard." *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-39, 12 N.R.C. 607, 623 n.7 (1980) (Pet. App. 96a-97a) [hereinafter cited as *Commission Decision*]. Moreover, although a hydrogen explosion occurred on the first day of the accident, no one recognized it as such until the following day. 1 Rogovin, *Three Mile Island—A Report to the Commissioners and to the Public* 42-43 (1980). In addition, the Commission's own Special Inquiry Group found that the reactor came within only 30 to 60 minutes of "the accident that we had been told by many in the industry could not happen: a core meltdown." *Id.* at 91.

[14] *President's Commission Report, supra,* note 3, at 13 (J.A. 90). The conclusion that the stress was short-lived was reached only a few months after the accident, before it was possible for long-term effects to have been discovered. Later surveys, filed with the Commission as a result of the remand by the court below, have shown that the conclusion was incorrect. The number of people suffering from post-traumatic health impairments has risen over time. *See, e.g.,* A Baum, R. Gatchel, R. Fleming, and C. Lake, Chronic and Acute Stress Associated with the Three Mile Island Accident and Decontamination: Preliminary Findings of a Longitudinal Study (1981); E. Bromet, Three Mile Island: Mental Health Findings (1980); P. Houts, R. Miller, G. Tokuhata, and K. Ham, Health Related Behavioral Impact of the Three Mile Island Nuclear Incident, pt. 2 (1980).

PANE shall be admitted upon a showing of "the bases for each contention set forth with reasonable specificity." 10 C.F.R. § 2.714(b) (1982). In this case, the Commission's Licensing Board took the additional step of requiring intervenors intending to raise psychological health issues to file a preliminary plan for the presentation of evidence on those issues.[15] The Board characterized this requirement as

> an invitation to petitioners affording them an early opportunity to convince the Board and the Commission that the psychological issues are suitable for adjudication.[16]

During the proceedings before the Commission, no party challenged the procedural sufficiency of PANE's contentions. Moreover, upon review of PANE's contentions and its plan for presentation of evidence, the Licensing Board found that

> [t]he intervenors have, in our view, established a sufficient prehearing basis for the premise that the [psychological] effects are measurable.[17]

On the basis of this conclusion and its analysis of NEPA, the Licensing Board recommended to the Commission that it consider psychological issues for the purpose of mitigating adverse psychological impacts.[18]

5. The Commission first considered PANE's contentions on December 5, 1980. At that time, the vote on whether to take evidence on the psychological health effects of restart was 2-2, with no substantive majority. Thus, the Commission denied PANE's contentions. Among the Commissioners' four separate opinions were three that acknowledged the authority of the Commission to examine psychological health impacts

---

[15] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289 (Restart) (Memorandum and Order Ruling on Petitions and Setting Special Prehearing Conference) (filed Sept. 24, 1979).

[16] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289 (Restart)(Memorandum and Order on Motions to Modify)(filed Oct. 17, 1979).

[17] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), LBP-80-8, 11 N.R.C. 297, 302 n.8 1980 [hereinafter cited as *Board Certification* (J.A. 36 n.8).

[18] *Id.* at 309 (J.A. 47).

(Ahearne, Bradford and Gilinisky).[19] Commissioners Bradford and Gilinsky asserted that the Commission should exercise that authority, but neither reached the question of whether such an examination is compelled by NEPA. On September 17, 1981, after the appointment of a fifth commissioner, the Commission voted 3-2 to affirm the denial of PANE's contentions, although the fifth Commissioner did not issue an opinion or concur in any of the previous opinions.[20]

6. The court of appeals issued its opinions and amended judgment on May 14, 1982. (Pet. App. 1a-76a). Judge Wright and Judge McGowan, with Judge Wilkey dissenting, held that psychological health damage is cognizable under NEPA in the circumstances presented by PANE's allegations.[21] The court ordered the Commission to examine the available information concerning psychological health effects at Three Mile Island in order to determine whether those effects are significant. The court concluded that if the Commission finds a significant health impact, it must prepare an environmental impact statement on the proposed restart of TMI-1. (Pet. App. 25a-28a).[22]

The court's decision was based on the following principles: (1) the damage to individual health at Three Mile Island constitutes an environmental effect under NEPA (Pet. App. 10a); (2) human health includes human psychological health

---

[19] *Commission Decision, supra* note 13, at 619-626 (Pet. App. 79a-81a, 91a-100a).

[20] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No.1), CLI-81-20, 14 N.R.C. 593 (1981)(Pet. App. 101a-102a).

[21] The court also held that the alleged psychological health damage is not cognizable under the Atomic Energy Act. No party has raised that issue here. Thus, the Commission's discussion of the Atomic Energy Act (NRC Br. at 48-49) has no bearing on this case.

[22] In its brief, the Commission misstates the holding as "requir[ing] consideration in the restart proceeding of petitioner's contentions respecting psychological stress." (NRC Br. at 12). *Amicus* Scientists and Engineers for Secure Energy ("SE_2") states that the court's holding violates *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519 (1978), by "requiring repeated (if not additional) procedures" of the Commission. SE_2 Br. at 7. This, too, is inaccurate. The court did not violate *Vermont Yankee*, or in any other way exceed the proper scope of judicial review. In ordering the Commission to determine whether the available information requires the preparation of an EIS, the court explicitly stated, "the Commission may choose the procedures by which it makes this determination." (Pet. App. 30a).

(Pet. App. 11a-12a); and (3) the health damage alleged at Three Mile Island is not comparable to mere anxieties and discomforts that have been held not to trigger NEPA consideration in other cases (Pet. App. 15a-16a). The court also held that the health damage alleged by PANE was sufficiently concrete to be considered (numerical quantification is not required), particularly in light of the Licensing Board's finding that PANE had made a sufficent pre-hearing showing of measurability (Pet. App. 14a).[23]

7. Since the court of appeals issued its opinions, two developments have occurred that may bear on the urgency of a decision by this Court. First, the estimate of the probable date for completion of repairs of the steam generator tubes in Unit 1 has continued to slip, from the end of 1982 (Utilities Petition at 6 n.8), to March or April 1983 by the latest public estimate. (Utilities Br. at 12 n.12). Second, on December 29, 1982, the Atomic Safety and Licensing Appeal Board ruled that it was not satisfied with the evidence with respect to a major reactor

[23] The court also ruled that the Commission's continuing responsibilities and actions with respect to TMI-1 in this particular circumstance require the Commission to determine whether new information now exists that would require the preparation of an environmental impact statement. (Pet. App. 18a-23a). Although petitioners have not raised the issue here, both they and *amicus* Atomic Industrial Forum complain that the court's language was broader than necessary for the decision because, they believe, it would require a new environmental analysis solely on the basis of new information, even if no new federal action were involved. (NRC Br. at 22 n.14, Utilities Br. at 13 n.14). These concerns appear unfounded. The decision below on whether this is a stage at which NEPA analysis may be required was based in part on two major Commission actions: (1) the Commission's finding that it lacked reasonable assurance of the safety of the reactor, and (2) the Commission's decision to hold an extensive public hearing comparable to an original licensing proceeding to determine whether restart should be allowed. (Pet. App. 20a-21a). Moreover, we agree with Judge Wilkey and all of the parties and *amici* who addressed the issue that the proposed restart of TMI-1 is itself a major federal action for which a NEPA evaluation would be required if all other statutory tests were met. (*See, e.g.*, NRC Br. at 22 n.14, Utilities Br. at 13 n.14, AIF Br. at 17). Although PANE would not object to a clarification that the restart itself is a proposed major federal action within the meaning of NEPA, a ruling on the issues raised by the Atomic Industrial Forum would make no practical difference in this case.

safety system.[24] As a result, the Appeal Board reopened the TMI-1 restart hearing. The current schedule provides for completion of the evidentiary hearing and filing of subsequent briefs by March 28, 1983. No indication has been given of the timing of the Appeal Board's decision or of its possible impact on the timing of a Commission decision on whether to authorize restart of TMI-1.

8. The sole issue before this Court is a legal question based on the factual allegations in PANE's first contention before the Licensing Board (Pet. App. 115a).[25] PANE has had no opportunity to address before the Commission any of the many factual arguments that appear in the briefs of the petitioners and their *amici.* [26] The decision by the Court below was a conclusion of law, properly assuming the truth of PANE's factual allegations. Accordingly, petitioners' arguments that have factual premises inconsistent with PANE's allegations or the Board's threshold ruling on measurability are not properly before this Court.[27]

---

[24] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), Docket No. 50-289, ALAB-708 (Design Issues) (Memorandum and Order)(filed Dec. 29, 1982).

[25] This case does not raise at least two other issues that are argued by *amicus* SE_2. First, there is no question of judicial infringement on the procedures adopted by the Commission under either the Administrative Procedure Act or NEPA. As we have noted, *supra* note 22, the court explicitly left procedural matters to the Commission. Second, there is no question of the sufficiency of PANE's participation in the restart proceeding. Neither the parties, the Licensing Board, nor the Commission has ever challenged PANE on those grounds. Because none of these issues has previously been raised, they cannot be raised here.

[26] The sole exception is the pre-hearing threshold issue of measurability of the alleged health damage, on which the Licensing Board ruled for PANE. *See supra* page 6, text accompanying note 17.

[27] The Commission argues that PANE now seeks to inject a new factual issue into the case: that the alleged psychological health damage is related to the potential impact of a possible reactor accident on the natural and physical environment. (NRC Br. at 43 n.29). But this interrelationship between the health of residents and the potential for nuclear accidents was the core of PANE's first contention: "Operation of Unit 1 would be a constant reminder

(footnote continues)

SUMMARY OF ARGUMENT

This case involves damage to human psychological health as a result of a federal action affecting the human environment surrounding Three Mile Island. PANE's first contention, which must be accepted as true for the purpose of this decision, alleges that: (1) the accident at Three Mile Island Unit No. 2 impaired the psychological health of residents of the area surrounding Three Mile Island; (2) the manifestations of that psychological health damage are similar to those recognized in the aftermath of other disasters; (3) the accident at Unit No. 2 sensitized area residents such that the restart of Unit No. 1 would revive the original trauma, cause further trauma, and make recovery impossible in that environment; and (4) the possibility of another accident at TMI-1 is a central cause of the health damage that will result from restart.

I.A. As this Court has recognized, the potential for harm to human health triggers the application of NEPA when all other statutory requirements are met. Indeed, the language of NEPA establishes that protection of human health is a central and primary goal of the statute. The legislative history confirms this point, as do the regulations of the Council on Environmental Quality.

I.B. This Court has previously held, with respect to other statutes, that the term "health" encompasses psychological

---

(footnote continues)

of the terror which [PANE's members] felt during the accident, and of the possibility that it will happen again." (Pet. App. 115a)(emphasis added). PANE's contention alleges that both the restart itself and the potential for an accident with massive harm to the natural and physical environment will cause the psychological health damage. The court of appeals properly accepted PANE's allegation as true for the purpose of making a legal ruling. The Commission must do the same here unless it wishes to interrupt this Court's review of the legal issues to institute an administrative proceeding to determine the proximate cause of the alleged health damage.

The Commission is also in error in suggesting that the court of appeals left it with no discretion to reject our contentions on the basis of proper factual findings. On the remand ordered by the court below, the Commission could decide, based on the record before it, that the psychological harm was so remote, speculative, or unquantifiable as to be immaterial in any sort of agency decision.

health. The legislative history demonstrates that Congress intended NEPA to apply to situations in which federal actions affecting the environment threaten harm to human psychological health. The only court other than the court below that has ruled on the psychological effects of federal action held that such effects must be considered in an environmental impact statement by the responsible federal agency.

The fact that fear may be an intervening link in the causal chain between the environment created by restart and the health damage alleged by PANE does not render NEPA inapplicable. NEPA encompasses both direct and indirect effects of federal actions. The health damage here is an indirect effect of the environmental change; as such, it is cognizable under NEPA. PANE seeks an evaluation, through accepted scientific methods, of the foreseeable health effects that will be caused by the environment created by the restart of TMI-1.

I.C.1. Section 102(2)(C) of NEPA requires that a federal agency undertake an environmental analysis if its action is likely "significantly [to] affect[] the quality of the human environment." The legislative history of NEPA reflects throughout that Congress intended to prevent areas of the nation, which are themselves natural and physical resources, from being lost to human use or becoming threatening to human health and well-being. That is what will happen in the area surrounding Three Mile Island if restart is allowed.

As PANE has alleged, a significant number of people will not be able to live in the environment at Three Mile Island without suffering harm to their health. For them, an area of the nation will have become hazardous, and they may have to leave to protect their own well-being. That degradation and effective loss of the use of the human environment is exactly what NEPA is intended to prevent.

The relevant case law supports the interpretation of "environment" under NEPA as extending to the human surroundings. Agencies have been required to analyze effects such as emotional isolation and increase in crime that might result from their actions affecting the nature of the human environment in a particular area. Similarly, here, the question is the

nature of the environment that would be created by the restart of TMI-1.

Petitioners propose that NEPA's application be limited to effects on what they term the "physical and natural environment." Their attempt to apply that limitation here, however, is not supported by the legislative history, the CEQ regulations, or the case law. In any event, this case meets petitioners' test because the restart of TMI-1 will cause the natural and physical surroundings at Three Mile Island to threaten human health.

I.C.2. Under PANE's contention, the potential for a future accident at TMI-1 accompanied by significant physical harm is a major source of the psychological health damage that PANE alleges would be caused by the restart of TMI-1. It is significant, in this regard, that the President's Commission has recognized that we must not assume that an accident equal to or worse than TMI-2 cannot happen again. More important, as a result of the TMI-2 accident, the Commission itself has ordered that environmental impact statements for reactor licenses include consideration of catastrophic nuclear accidents involving releases of radioactivity from the reactor. Thus, the Commission is in the extraordinary position of ordering that the remote physical effects of an accident be considered under NEPA, while arguing that the immediate health effects of restart should be ignored. This attempt to create a dichotomy among the kinds of health consequences that may arise from an environmentally related federal action is contrary to the goals and purposes of NEPA. Moreover, it contravenes the principle that agencies must consider the reasonably forseeable effects of their actions affecting the environment.

I.C.3. The measurability of the health damage alleged by PANE is a question of fact. The resolution of such questions is entrusted to administrative agencies, subject to limited judicial review. In this case, the Licensing Board has already held that PANE established "a sufficient prehearing basis for the premise that the effects are measurable." This procedural, threshold decision must stand, absent a finding that it is arbitrary. No such showing has been attempted by any party.

Moreover, NEPA does not require the precise measurability sought by petitioners. The point of the statute is to assure that federal agencies take into account the available information relevant to the environmental effects of their actions. Agencies need not predict those effects with precision. Rather, they are required only to make a reasonable effort to forecast the effects in light of the available information.

II. In arguing that the decision below would be broadly applied and pose an undue burden on the Commission and other federal agencies, petitioners ignore the explicit limitations of NEPA and the extremely broad range of agency discretion under the statute.

II.A. The decision below relates to the effects of restart on people in the area surrounding Three Mile Island. There is nothing in the decision to suggest that the health effect alone would have been held cognizable under NEPA independent of its relationship to the particular environment at Three Mile Island.

Section 102(2)(C) establishes the two explicit limiting principles of NEPA. First, there must be an effect on the quality of the human environment. This test prevents the broad application of NEPA to non-environmentally related actions of other federal agencies. Second, the effect must be significant. As an issue of law, this test serves initially to screen out effects that are not significant in terms of the goals and purposes of NEPA.

II.B. A narrow, highly deferential standard of judical review governs every stage of Commission compliance with NEPA. A decision not to prepare an EIS will be upheld if it is reasonable. Similarily, the EIS itself, if one is prepared, will be upheld if it is reasonable. The decision below does not require the Commission to use any particular procedures in fulfilling either of these responsibilities. The rulings of this Court confirm that the Commission's ultimate decision concerning the proposed restart of TMI-1 is entitled to substantial deference as long as NEPA's procedural requirements have been met.

II.C. As written, the decision below applies narrowly to situations in which there is a previously traumatized population,

as there is here. Moreover, the Commission and other agencies have broad discretion to establish threshold procedural requirements that must be met before they will consider an issue under NEPA. *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519 (1978). Thus, agencies have the means to prevent consideration of frivolous claims. In this case, the Commission's Licensing Board found that PANE had met the threshold test that the Board employed.

Finally, even if the Commission were required to consider psychological health damage with respect to all reactor licensing decisions, the burden would be minimal. The Commission has the full authority to undertake the consideration through a generic rulemaking proceeding, subject only to the procedural requirements discussed by this Court in *Vermont Yankee*. The outcome of the proceeding would apply to all licensing decisions and would be entitled to substantial deference.

ARGUMENT

PANE's first contention establishes the factual basis for this Court's review. Absent any showing that the allegations are a "sham and raise[ ] no genuine issue of fact," they must be assumed as true for the purpose of this decision. *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 689-90 & n.15 (1973). No such showing or other proper challenge to PANE's contention has been attempted.

The contention contains the following essential elements:[28]

1) The accident at Unit 2 impaired the psychological health of surrounding residents, as evidenced in part by physical symptoms.

2) The manifestations of psychological health damage at Three Mile Island are similar to those recognized in the aftermath of other disasters.

---

[28] The full text of the contention is reproduced in Appendix B to this brief.

3) The psychological health damage caused by the accident at Unit 2 has sensitized its victims such that restart of Unit 1 would revive the original trauma, cause further trauma, and make recovery impossible in the TMI area.

4) The possibility that another nuclear accident could happen at Unit 1 is central to the psychological health damage that would be caused by the restart.

The question before the Court is whether the restart of TMI-1, which will cause the local environment to threaten human health, affects "the quality of the human environment" under section 102(2)(C) of NEPA, 42 U.S.C. § 4332(C)(2). The issue is one of first impression in this Court.

I. Section 102(2)(C) of NEPA Requires the Commission to Evaluate and Consider the Psychological Health Damage that PANE Has Alleged Will Be Caused by the Restart of TMI-1.

A. Protection of human health is the primary concern of NEPA.

In *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 539 (1978), this Court recognized the significance of potential human health impacts under NEPA. Indeed the protection of human health is by far the most important goal of the statute. As Judge Wilkey acknowledged in his dissent below,

> [t]here is no question that NEPA's requirements extend to effects on human health.

(Pet. App. 35a).

Section 2 of NEPA, 42 U.S.C. § 4321, provides that one of the purposes of the statute is to "stimulate the *health* and welfare of man" (emphasis added).[29] Section 101(b) expresses the intent to

---

[29] The Commission is correct (NRC Br. at 35) that Congress chose this language carefully. It is health damage caused by or involved in the relationship between humans and the environment that is of concern under

(footnote continued)

> (2) assure for all Americans safe, *healthful*, productive, and esthetically and culturally pleasing surroundings;

and to

> (3) attain the widest range of beneficial uses of the environment without degradation, risk to *health* or safety, or other undesirable and unintended consequences.

42 U.S.C. § 4331(b) (emphases added). Section 101(c) also demonstrates Congress' central and primary concern with human health:

> (c) The Congress recognizes that each person should enjoy a *healthful environment* . . . .

42 U.S.C. § 4331(c) (emphasis added).

The legislative history affirms the fundamental underlying concern for human health. This concern was apparent throughout Senator Jackson's remarks during the hearings and debates:

> A national policy for the environment is thus above all else a national policy for the welfare and survival of man.[30]

> What is involved is a congressional declaration that we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the *health* of mankind.[31]

(footnote continued)

NEPA. As we demonstrate below in I.C.1. & 2., that is precisely the situation here. Moreover, contrary to the Commission's basic argument, the decision below is consistent with this premise. That decision was not reached in a vacuum, but in the context of harm to a particular population in a specific geographical environment. The health damage relates only to that environment and to no other. It distorts the decision to suggest that it applies to all federal actions with any sort of impact on human health, regardless of the relationship to the human environment.

[30] 115 Cong. Rec. 3702 (1969).

[31] 115 Cong. Rec. 19,009 (1969) (emphasis added).

See also remarks of Senator Jackson during the Senate debates, *infra* at 18-19, 25. In light of this congressional concern, "[no] subject to be covered in an EIS can be more important than the potential effects of a federal program upon the health of human beings." *Citizens Against Toxic Sprays, Inc. v. Bergland,* 428 F. Supp. 908, 927 (D. Or. 1977).

The fundamental importance of human health under NEPA is also reflected in the implementing regulations of the Council on Environmental Quality ("CEQ"). Section 1508.8(b) explicitly includes effects on health among the effects that must be considered under NEPA. 40 C.F.R. § 1508.8(b) (1982). Section 1508.27(b) identifies the concerns that must be taken into account in determining whether an effect is "significant" under section 102(2)(C) of NEPA. 40 C.F.R. § 1508.27(b) (1982). Under section 1508.27(b)(2), CEQ expressly identified impacts on human health as the first to be considered in determining whether an environmental impact statement must be prepared.

B. NEPA's protection of human health encompasses human psychological health.

Although the Utilities are correct in stating that NEPA does not, on its face, refer specifically to psychological health (Utilities Br. at 19), the statute's repeated general references to human health do not distinguish among the myriad causes of health damage. This Court has long held that the statutory term "health" includes psychological health in the absence of specific indication to the contrary. In *United States v. Vuitch,* 402 U.S. 62 (1971), the Court held that the word "health" in the statute in question should be read according to its dictionary definition as "the state of being sound in body or *mind.*" The Court concluded that

> this construction accords with the general usage and modern understanding of the word "*health,*" which *includes psychological as well as physical well being.*

Id. at 72 (emphases added).[32]

---

[32] *Accord, Doe v. Bolton,* 410 U.S. 179, 192 (1973) (health includes emotional and psychological factors). *See also Diamond v. Chakrabarty,* 447

(footnote continues)

The legislative history specifically documents Congress' awareness of and concern for human psychological health when it enacted the statute. Both Senator Jackson and the Senate Committee took notice of the

> crowding, congestion, and conditions within our central cities which result in civil unrest and detract from man's social and *psychological well-being.* [33]

(footnote continued)

U.S. 303, 308 (1980) (quoting *Perrin v. United States,* 444 U.S. 37, 42 (1979) (statutory terms to be interpreted according to their "ordinary contemporary, common meaning").

The Utilities argue, without authority, that Congress always makes specific reference to psychological health when it intends the subject to be covered (Utilities Br. at 19 n.15). But this was not true of the statutes construed in *United States v. Vuitch* and *Doe v. Bolton,* and it is not true of another widely applicable statute, the Internal Revenue Code. *Compare* I.R.C. § 105(a) (1967) (amounts received by an employee under a "health plan" includable in gross income) *with* Treas. Reg. § 7.105-2(d) (1982) (indicating in Example 9 that "health" encompasses mental health). Also, *compare* I.R.C. § 213 (1978) (allowing deductions for medical expenses) *with* Treas. Reg. § 1.213-1(e)(1)(ii) (1982) (including costs related to mental defect or illness among deductable expenses). Only "a very palpable restriction in the legislative history" of a statute would permit the Utilities' strained reading of the common meaning of the term. *New Hampshire v. Atomic Energy Comm'n,* 406 F.2d 170, 173-74 (1st Cir.), *cert. denied,* 395 U.S. 962 (1969), *cited at* Pet. App. 62a. No such restriction appears anywhere in the legislative history of NEPA.

[33] 115 Cong. Rec. 29, 067 (1969); S. Rep. No. 296, 91st Cong., 1st Sess. 4 (1969); [hereinafter cited as S. Rep.]. The Commission argues that each of the environmental problems discussed in this passage "is rooted in a discernable impact upon the natural or physical environment" (NRC Br. at 34), such that the physical impact, but not the resulting psychological damage, should be considered under NEPA. The Utilities make a similar argument. (Utilities Br. at 22 n.17). But faltering and poorly designed transportation systems and architectural ugliness, also referred to in this passage, are hardly comparable to the sort of direct damage to a physical object or by a physical actor that is sought by the Commission as a limiting principle, yet they were unquestionably "environmental quality problems" in the eyes of Congress. S. Rep. at 4. Similarly, crowding and congestion may not be caused by actual physical impacts, yet they, too, are within the contemplation of Congress. *Id.*

In any event, as we discuss below, this case involves an effect on the quality of the human environment, even if termed the "physical or natural environment." *See* discussion at pages 25, 30-32, *infra.*

(Emphasis added). Indeed, Senator Jackson opened the Senate debate on NEPA by referring to the purpose of the statute as follows:

> to . . . insure that present and future generations of Americans will be able to live in and enjoy an environment free of *hazards to mental and physical well being.*

115 Cong. Rec. 3698 (1969) (emphasis added). The seminal report on which Senator Jackson and the Senate Committee relied includes "psychological discomfort," *id.* at 3704, and "psychophysical stress," *id.* at 3703, among the costs of federal effects on the human environment. The same report specifically recommended behavioral scientists, which includes psychologists, as sources for information and guidance critical to the implementation of NEPA. *Id.* In section 102(2)(A), Congress embraced precisely that recommendation by directing that agencies "insure the integrated use of the natural and social sciences . . . in planning and in decisionmaking which may have an impact on man's environment." 42 U.S.C. § 4332(2)(A).

The only court that has actually ruled on an issue involving psychological considerations held that such impacts must be addressed when an EIS is prepared. In *Chelsea Neighborhood Associations v. United States Postal Service,* 516 F.2d 378 (2d Cir. 1975), the Second Circuit emphasized the need to consider what must be termed the "psychological effects" of a plan to construct a housing project on top of a postal facility. The court directed the Postal Service to examine "the effect [of] living at the top of an 80-foot plateau," involving "emotional as well as physical isolation from the community." In the court's words, the agency was required to consider whether its project might become a "human jungle" as a result of these psychological considerations. *Id.* at 388.

The argument for consideration of psychological factors here is far stronger than in *Chelsea* because this case rests upon an allegation of severe damage to human health. As a matter

of law, all environmentally related health damage, whether physical or psychological, is a central concern of NEPA.[34]

Congress did not distinguish among the immediate causes of health damage cognizable under NEPA. The statute requires only that there be a significant effect on the quality of the human environment. 42 U.S.C. § 4332(2)(C). The CEQ regulations make it clear that health damage is cognizable as an "indirect effect" of federal actions affecting the quality of the human environment. 40 C.F.R. § 1508.8(b) (1982).

Contrary to this principle, the Commission and the Utilities attempt to separate out "fears" and "perceptions" as the causes of the psychological health damage and to contrive an argument that environmental change is somehow not responsible for the health damage that restart would create. They also assert that PANE seeks an evaluation of "fears" or "perceptions" themselves, rather than health damage. (NRC Br. at 26, 41, 43; Utilities Br. at 18, 24, 31).[35]

But PANE does not seek an evaluation of fears or perceptions. They are material only as an immediate causal link between the alteration of the human environment at TMI and the resulting health damage. NEPA requires an analysis of the

---

[34] The Utilities appear to argue that psychological health damage is not cognizable under NEPA because it, like natural beauty, is a mere byproduct of improving the physical environment. (Utilities Br. at 22). But the same is true of physical health damage. Protection from the physical health damage of cancer is merely a byproduct of assuring against excessive radiation exposure. Yet there is no doubt that the Commission must consider the likely incidence of cancer from a proposed nuclear facility. Similarly, where psychological health damage is involved, the Commission must consider the incidence of that damage in evaluating the proposed action.

[35] The Commission also argues (NRC Br. at 47-48) that this psychological health damage cannot be considered under NEPA because it is not susceptible to mitigation. This is a question of fact. PANE believes that preventing restart is the best means of mitigating the damage. However, less drastic measures, such as a very cautious and gradual increase to full power or a limitation on the force of the chain reaction, perhaps coupled with other measures, may serve to mitigate the damage to some degree. *Amicus* American Psychological Association describes other possibilities. All of these are factual questions appropriate for resolution by the Commission.

environmentally generated health effects of federal action; as long as the health damage is related to the environment, NEPA applies regardless of any specific intervening causal relationship.[36]

In the case of the afflicted, post-traumatic population at Three Mile Island, PANE has alleged and offered to prove that the initial fear reaction caused by the change in the surrounding environment will produce severe health damage. In some cases, this sort of health damage leads to incapacitation or suicidal tendencies.[37] PANE seeks an evaluation of that health damage through accepted medical and scientific methods.[38]

There is nothing in NEPA to suggest that such health damage directly related to an alteration in the environment is not to be considered. Thus, the question cannot be simply whether fear or some other psychological condition is involved in the causal chain, but whether there is an environmental cause for the health damage. We now turn to that issue.

---

[36] The Council on Environmental Quality has confirmed that psychological health damage must be considered under NEPA despite the fact that human emotions are part of the causal chain between the federal action with respect to the environment and the resulting health damage. In a letter dated February 14, 1980, counsel for CEQ responded to a PANE member's inquiry concerning "psychological feelings," stating, "For the purposes of NEPA, 'effects on the human environment' include the full range of potential health effects on human beings." This letter was only recently provided to PANE's counsel. It is reproduced as Appendix C to this brief.

[37] American Psychiatric Ass'n, *Diagnostic and Statistical Manual of Mental Disorders* 237 (3d ed. 1980) [hereinafter cited as *DSM-III*].

[38] Thus, PANE does not seek to have the Commission take into account "public disagreement" with restart (NRC Br. at 41) or "the views of the population itself," (Pet. App. 37a-38a, Wilkey, J., dissenting). These are political views on an issue that Judge Wilkey correctly emphasizes has already been determined by Congress. *Id.* The issue here is not one of politics, but one of the tangible health impact of restart of TMI-1 on the immediately surrounding residents.

For the same reason, the evaluation sought by PANE would not, contrary to the Utilities' assertion (Utilities Br. at 33), result in "irrational decision making." Rather, by bringing the best available scientific information to bear on the Commission's ultimate decision, it would improve the rationality of the decision. *See* discussion, *infra* at 36 note 63.

C. The Commission must consider the environmentally related health damage that will be caused by the restart of TMI-1.

1. The restart of TMI-1 will create an environment that damages human health.

Section 102(2)(C) of NEPA, 42 U.S.C. § 4332(2)(C) (1976), governs the circumstances under which federal agencies must evaluate the alleged impacts of their proposed actions. It requires that federal agencies prepare an environmental impact statement ("EIS") with respect to any proposed major federal action "significantly affecting the quality of the human environment."[39] This Court recognized in *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. at 539, that the potential for environmentally caused human health damage triggers the application of NEPA. Therefore, the psychological health damage that PANE alleges here must be considered by the Commission if it arises from the effect of the restart of TMI-1 upon the quality of the human environment.[40]

The most significant goals of NEPA are "to encourage productive and enjoyable harmony between man and his

---

[39] The issue here is solely whether the alleged psychological health damage involves an effect on the human environment as a matter of law. If it is, then the agency must determine whether the effect is significant as a matter of fact, such that an environmental impact statement is required. This agency determination is the "environmental assessment" now embodied in the CEQ regulations, 40 C.F.R. §§ 1501.4(b) and (c), and 1508.9 (1982). The factual question of whether the alleged health damage is significant, and thus, whether an environmental impact statement is required, is not before the Court.

[40] The Commission appears to distinguish between an "environmental impact," as the term is used section 102(2)(C)(i), and an impact on the quality of the "human environment" in section 102(2)(C). (NRC Br. at 24). We can discern no such distinction. If the "human environment" differs from the "environment," federal officals could be required to prepared detailed statements on alternatives to their proposed actions (§ 102(2)(C)(iii)), although the actions themselves did not involve "environmental impacts." Clearly, this is not what Congress intended, and the Commission has cited no authority for this proposition. It may be that the Commission, in this passage, is simply emphasizing that a federal impact on human health is not cognizable under NEPA unless the impact relates to the surrounding environment. If so, the question is what constitutes the surrounding environment, which we discuss here.

environment," and to "stimulate the health and welfare of man." 42 U.S.C. § 4321 (1976)(emphasis added). The statutory term "human environment" is defined by the Council on Environmental Quality as follows:

> "Human Environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment.[41]

As this Court has held, CEQ's interpretation of NEPA is entitled to substantial deference. *Andrus v. Sierra Club,* 442 U.S. 347, 358 (1979).

The psychological health damage to people at Three Mile Island would be caused directly by a change in their environment. Whereas they now live in an environment free from the potential for a nuclear accident, when restart occurs they will live in an entirely different environment, with renewed potential for a nuclear accident and further exposure to radiation. The alleged health damage to the surrounding population will flow directly from the risk of accident that will arise if the reactor is restarted.[42] That change in the human environment is the *sine qua non* of the danger to human health, without which the damage would not occur.

It is precisely the relationship between human beings and their environment (40 C.F.R. § 1508.14 (1982)) that will cause

---

[41] 40 C.F.R. § 1508.14 (1982). CEQ added the following proviso:

> This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

[42] The Commission suggests (NRC Br. at 29) that this cases involves stress alleged to arise from the mere existence of TMI-1, regardless of whether the reactor is in operation or poses the threat of radiation exposure. This is simply incorrect. PANE's contention encompasses the fact that renewed operation of TMI-1 raises the possibility that another accident will occur. Appendix B, *infra.* This potential cannot be divorced from reactor operation. The Commission has recently acknowledged that the accident risk is significant enough to require the consideration of the consequences of catastrophic accidents in environmental impact statements prepared since the TMI-2 accident. 45 Fed. Reg. 40,101 (1980). *See* discussion below at 32.

damage to human health when TMI-1 is restarted. As PANE has alleged, a significant number of people who live in the area will suffer psychological health damage, as real and as environmentally related as any human illness caused by the presence of chemicals, microbes, or other pollutants present in the human surroundings. They will not be able to live in the environment at Three Mile Island without suffering that health damage. As we explained in our opposition to the petitions for writs of *certiorari*, they could alleviate the harm by moving away from that environment (Br. in Opposition to Petitions at 53-54 n.45). There can be no more compelling evidence to prove that their health damage is caused by their surrounding environment.[43]

The Second Circuit's decision in *Chelsea Neighborhood Associations v. United States Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975), reflects the clearest recognition that NEPA's concept of the environment involves this relationship between people and their surroundings. There, the court addressed the effects on prospective residents of the construction of a proposed apartment building above a vehicle maintenance facility. The court held that NEPA required analysis of the effects on people of the quality and character of the environment that would be created by completion of the project according to the design. Just as NEPA required consideration of the relationship between people and their environment in *Chelsea*, so it requires consideration of the psychological health damage that would result from the alteration of the environment at Three Mile Island by the restart of TMI-1.

---

[43] The Commission has attempted to respond to this point by arguing that the same could be said of any federal action that affects people in any manner and that NEPA is not limited to localized phenomena. They are in error on the first point. Not all federal actions, indeed very few, have the potential to harm human health. They are, of course, correct on the second point, that NEPA is not limited to localized phenomena. But that proves nothing here. The Commission would hardly argue that NEPA applies only to nationwide phenomena and that agencies need not consider damage to the quality of the human environment in a particular area. The fact that people could move away from TMI serves only to define the affected area, not to limit the application of NEPA to that or any other locality.

The legislative history confirms that this degradation of health through alteration of the surroundings in which people live is precisely the type of environmental harm NEPA was intended to address. As Senator Jackson emphasized when he introduced S. 1075, which became NEPA,

> The purpose of this legislation is to . . . insure that present and future generations of Americans will be able to live in and enjoy *an environment free of hazards to mental and physical well being.*

115 Cong. Rec. 3698 (1969) (emphasis added). In the words of the Senate Report,

> The expression "environmental quality" symbolizes the complex and interrelated aspects of man's dependence upon his environment.

S. Rep., *supra* note 33, at 16. We must, therefore, husband those aspects of our environment "—air, water, soil, and living space—[for which] technology at present provides no substitutes." *Id.*

As Senator Jackson emphasized, the purpose of NEPA is to address the "problems involving the quality of our surroundings and man's relationship to the environment," 115 Cong. Rec. 3699 (1969), in order to maintain "the integrity and viability of the environment." *Id.* at 3700.[44]

Petitioners cite legislative history discussing human dependence on the environment and its "life support systems" for the proposition that NEPA encompasses only impacts upon or propagated through the "physical or natural environment." (NRC Br. at 32-33; Utilities Br. at 22-23). The health effects at issue here meet that test. The geographic area surrounding Three Mile Island is a "physical and natural environment." As PANE alleges, if TMI-1 is reactivated the surrounding physical and natural environment will become harmful to human health.

---

[44] Similarly, one of the seminal sources on which NEPA was based, a special report to the Senate Committee on Interior and Insular Affairs, identified as a major goal of the statute "[t]o restore and revitalize damaged areas of our Nation. . . ." 115 Cong. Rec. 3702 (1969) (remarks of Senator Jackson).

The "physical or natural environment" analysis proposed by petitioners is, in any event, an unproductive tautology. Everything in our environment is physical or natural. Thus, the modifiers do not exclude anything from consideration under section 102(2)(C). Virtually any esthetic concern, for example, meets the test, since it involves physical objects, whether landscaping for a new federal facility, or perhaps even the color of paint on a wall. *See, e.g., Maryland-National Capital Park and Planning Commission v. United States Postal Service,* 487 F.2d 1029, 1038 (D.C. Cir. 1973).

This contrived distinction is without support in either the statute or the legislative history. The word "physical" does not appear in the statute at all, and the term "natural environment" appears only once, and then in a section that otherwise emphasizes the broad reach of the statute. And none of the legislative history, including that cited by petitioners, is language of limitation. The assertion that Congress was concerned with physical harm belabors the obvious. As we have demonstrated, *supra* at 25 & note 44, Congress repeatedly expressed its concern with the effects of all aspects of human surroundings on health and well-being.[45]

Thus, the question is not only whether some pollutant is discharged, whether some particular object is affected, or whether the direct impact on people is through some physical variable, but whether the surroundings threaten human health and well-being.[46] If TMI-1 is restarted, an area of the nation will become harmful to the health of its inhabitants. Therefore, an environmental analysis is required before the facility may be operated. If NEPA is to be interpreted in light of the statutory purposes discussed above, as it must be, *Philbrook v. Glodgett,*

---

[45] As we argue below at 37-40, the explicit statutory limiting principles are (1) the requirement for an effect on "the quality of the human environment," and (2) the requirement that the effect be significant.

[46] It is noteworthy that this concept of the "environment" as encompassing all aspects of the surroundings rather than particular physical objects, is the same as that in the dictionary definition of the term:

> Environment . . . .
>
> [2] . . . That which environs; the objects or the region surrounding anything.

2 Oxford English Dictionary 231 (1933).

421 U.S. 707, 713 (1975), the restart of TMI-1 must be considered to involve an effect on the quality of the human environment.

Although the issue is one of first impression in this Court, *Chelsea Neighborhood Associations v. United States Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975), and analogous cases in the lower courts support this conclusion.[47] In *Hanly v. Mitchell*, 460 F.2d 640 (2d Cir. 1972) (*Hanly I*), *cert. denied*, 409 U.S. 990 (1972), the Second Circuit ruled that NEPA's protection of "the quality of life" for city residents extended beyond sewage, garbage, and air and water pollution to noise, demonstrations, the potential for disturbances at a proposed jail, and the potential danger from the operation of an out-patient clinic at the jail. *Id.* at 647. As a result, the court directed the General Services Administration ("GSA") to reconsider its decision that the project did not involve a significant impact on the quality of the human environment. *Id.* at 648-49.

The Second Circuit reviewed the matter again in *Hanly v. Kleindienst*, 471 F.2d 471 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973)(*Hanly II*), in which it again held the GSA's determination of no significant environmental impact to be inadequate. The court remanded to the agency for the purpose of determining whether the jail and its attendant programs involved a substantially increased risk of crime in the area. It held that if the project were likely to cause an increased risk of crime, that "might tip the scales in favor of a mandatory detailed impact statement." *Id.* at 834. The Seventh Circuit adopted the same principle in *dicta* in *First National Bank of Chicago v. Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973). It did not need to reach the issue, however, because the district court had held, after reviewing the facts, that there would be no significant increase in crime created by the construction of a jail in that case. *Id.* at 1376.[48]

---

[47] Many of these cases ultimately restrict the application of NEPA on the particular circumstances involved precisely because they did not involve the sort of health damage or other impact that is at the core of NEPA's concerns.

[48] The Seventh Circuit also left open the question of whether "public sensibilities" related to the proposed jail would be cognizable under NEPA if they were accompanied by a showing that the danger of crime would rise if the jail were built. *Id.*

In these cases, the courts recognized that an environmental analysis is required where the effect of a federal action on the human surroundings had the potential for causing serious harm to human well-being. It is significant that the *Hanly II* court viewed the danger of crime itself as an environmental effect that could trigger the requirement to prepare an environmental impact statement. The court reached this result although the physical impacts related to jail construction were not significant enough to trigger the EIS requirement, and although those physical construction impacts were not themselves related to the degree of potential increase in crime. *Hanly II*, 471 F.2d at 834.[49]

In terms of section 102(2)(C) of NEPA, these courts recognized that the potential for increased crime would be caused by a change in the quality of the surrounding human environment, such that an environmental analysis would be required. That principle governs here. The Commission must consider the psychological health damage that would result from the change that restart will cause in the human environment at Three Mile Island.[50]

---

[49] Thus, these cases are in direct conflict with the petitioners' assertion that NEPA requires an impact upon or propagation through some particular natural or physical aspect of the environment. (NRC Br. at 27, Utilities Br. at 21-24). Only the action of the criminals lured or released into the area by virtue of the changed nature of the environment would cause the threat to human beings through an increase in crime. The physical impacts of construction would not "propagate" the threat of crime, yet NEPA applies to the change in the local environment. *See also Trinity Episcopal School Corp. v. Romney*, 523 F.2d 88, 93 (2d Cir. 1975)(urban environment encompasses such non-physical aspects of the human-environment relationship as "density, . . . quality of the built environment, . . . decay and blight, . . . [and] neighborhood stability").

[50] Petitioners rely on these two cases, as well as *Maryland-National Capital Parks and Planning Comm'n*, 487 F.2d 1029 (D.C. Cir. 1973); *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976); and *Como-Falcon Community Coalition, Inc. v. United States Dep't of Labor*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980), all of which involved the introduction of low income people into an area through public housing, a job training center, and a facility using unskilled labor. The potential effect of those people on the community was rejected as a NEPA consideration on "overriding national polic[y]" grounds. *Board Certification*, 11 N.R.C. at 303 (J.A. 38). *See, e.g., Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d at 231.

(footnote continues)

Petitioners rely heavily upon a line of cases holding that various socioeconomic impacts of federal actions, particularly the loss of jobs at military installations, cannot trigger the preparation of an environmental impact statement because they do not involve a "primary impact" upon the physical environment.[51] None of these cases presents a fact situation at all similar to that now before the Court. Furthermore, as we have shown the "physical or natural environment" theory on which they are based does not preclude consideration of the human health damage alleged here. In fact, most of these cases explicitly support the proposition that the concept of the environment embodied in NEPA is not limited to physical or natural aspects of the human surroundings. *See, e.g., Breckinridge v. Rumsfeld,* 537 F.2d 864, 865-66 (6th Cir. 1976), *cert. denied,* 429 U.S. 1061 (1977) (NEPA application beyond the "physical environment" not in dispute).

More important to this analysis, none of these cases involves a federal action that would fundamentally change the physical reality of the surrounding environment. They involve strictly economic impacts and the loss of job opportunities. In each case, the physical reality of the area remains the same, and the jobs and economic circumstances could be revived with no

---

(footnote continued)

polic[y]" grounds. *Board Certification,* 11 N.R.C. at 303 (J.A. 38). *See, e.g., Nucleus of Chicago Homeowners Ass'n v. Lynn,* 524 F.2d at 231.

Moreover, none of those cases involved effects on human health, or any other effects central to the purpose and goals of NEPA. Rather, they involved social interactions among people, a matter which does not appear anywhere as a central concern of Congress under the statute.

[51] *Breckinridge v. Rumsfeld,* 537 F.2d 864 (6th Cir. 1976), *cert. denied,* 429 U.S. 1061 (1977); *Image of Greater San Antonio, Texas v. Brown,* 570 F.2d 517 (5th Cir. 1978); *National Ass'n of Gov't Employees v. Rumsfeld,* 413 F. Supp. 1224 (D.D.C. 1976), *aff'd,* 556 F.2d 76 (1977); *Metlakatla Indian Community v. Adams,* 427 F. Supp. 871 (D.D.C. 1977). In addition to military base closings, this line of decisions involves the economic impacts of highway construction, *Citizens Comm. Against Interstate Route 675 v. Lewis,* 542 F. Supp. 496 (S.D. Ohio 1982); a proposal to use existing structures for a job training center, *Como-Falcon Coalition, Inc. v. United States Dep't of Labor,* 609 F.2d 342 (8th Cir. 1979), *cert. denied,* 446 U.S. 936 (1980); and the possible displacement of artists from a building in downtown San Francisco, *Goodman Group, Inc. v. Dishroom,* 679 F.2d 182 (9th Cir. 1982).

change in the surrounding physical reality.[52] Moreover, those cases do not involve damage to human health, which is at the heart of NEPA. By contrast, at Three Mile Island the change in the nature and human health effect of the environment is embodied in the operation of a nuclear reactor, with the attendant risk of a nuclear accident.

2. The human psychological health damage that will be caused at Three Mile Island is directly related to harm to the physical and natural environment.

From the beginning of this case, there has never been any question that the potential for harm from the physical effects of a nuclear accident is the source of the psychological health damage that exists today and of the damage that PANE alleges would be caused by the restart of TMI-1. The aspect of restart that is most significant to the health damage now at issue is the potential for massive radiation exposure and physical health consequences from an accident at TMI-1.

This fact is central to the allegations in the contention that PANE filed with the Licensing Board:

> Operation of Unit 1 would be a constant reminder of the terror which they felt during the accident, and of the possibility that it will happen again. The distress caused by this ever present spectre of disaster makes it impossible for the NRC to operate TMI-1 without endangering the public health and safety.

Appendix B, *infra*. [53]

---

[52] In addition, as discussed more fully below, the socioeconomic impacts at issue in these cases are not "significant" under section 102(2)(C) in light of the goals and purposes of NEPA.

[53] As noted by the Utilities (Utilities Br. at 10), we did argue to the Licensing Board that the psychological harm would be caused even if the reactor were rendered absolutely safe. This assertion relates to the specific characteristics of post-traumatic stress disorder as recognized in American Psychiatric Ass'n, *Diagnostic and Statistical Manual of Mental Disorders* 237 (3d ed. 1980), and it would involve the factual question of whether reactor operation by itself, even if "absolutely safe," would be sufficient to traumatize the population. PANE had no need to make any such factual showing.

(footnote continued)

In *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. at 538-39, this Court recognized the principle that a federal agency must consider not only the immediate and definite environmental effects of its actions, but also those effects that are reasonably foreseeable. *Accord, Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. Cir. 1973); *Concerned About Trident v. Rumsfeld*, 555 F.2d 817, 830 (D.C. Cir. 1977). Insofar as NEPA requires an EIS for the remote effects of serious radiation exposure as in *Vermont Yankee*,[54] NEPA also requires an EIS for health effects that are the foreseeable and immediate result of the potential for such serious radiation exposure. It is difficult to imagine a tighter chain of proximate cause between the effect on the physical environment and the damage to human health.[55]

In their brief, the Utilities emphasize the extensive nature of the safety review that has taken place with respect to TMI-1 since the accident at TMI-2. (Utilities Br. at 9-10, 33-34). They imply that the facility must therefore be considered safe such that an accident similar to TMI-2 or worse could not occur again, and thus, that the potential for such an accident should not be considered in deciding whether TMI-1 should be restarted. The President's Commission, however, disagreed with this proposition that the risk of future accidents need not be taken into account:

> [W]e must not assume that an accident of this or greater seriousness cannot happen again, even if the changes we recommend are made.[56]

(footnote continued)

however, because its allegation specifically incorporated the prospect of a future accident as one of the reasons for the psychological health damage that would be caused by restart. The legal rulings thus far have correctly been based upon PANE's allegations.

[54] *Cf.* 10 C.F.R. § 51.23(c), requiring consideration of the health effects of the uranium fuel cycle.

[55] The Commission's argument that the alleged psychological health damage is not related to the physical damage because it simply "flows from a common source" and is not otherwise relevant to the physical damage (NRC Br. at 45) is utterly at odds with reality and with PANE's contention. The health damage flows from the restart source *because* the potential for physical damage also flows from that source.

[56] *President's Commission Report, supra* note 3, at 15 (J.A. 93).

Indeed, as a result of the accident at TMI-2, the NRC has ordered that each environmental impact statement on a proposed nuclear reactor must consider the consequences of a catastrophic accident involving "releases of radiation and/or radioactive materials" from the reactor. 45 Fed. Reg. 40,101 (1980). This constitutes a reversal of a previous position in which the consequences of such reactor accidents were not examined in the NEPA process because they were considered to be too remote to justify evaluation and disclosure. *Id.* [57]

Thus, the Commission finds itself in an extraordinary position: it orders that the highly remote, potential releases of radioactivity in a nuclear accident be considered in environmental impact statements; at the same time, it argues that the immediate, direct human health consequences of those potential releases should be ignored. This effort to create a dichotomy among the kinds of health consequences that may arise from an environmentally related federal action is contrary to the goals and purposes of NEPA discussed earlier, *supra* at 18-19, 25, and to the principle that federal agencies must consider the reasonably foreseeable effects of their environmentally related actions. *See* discussion, *supra* at 31.[58]

---

[57] Extrapolating from their premise that the potential for a serious accident need not be considered, the Utilities argue that psychological health hazards caused by concern about future accidents cannot be considered because the concern is irrational. (Utilities Br. at 33-34). Assuming, *arguendo*, that the Utilities are correct that the concern or fear that triggers the psychological health damage is unreasonable, the assertion proves nothing. The fact remains that restart will cause psychological health damage, which is a central concern of NEPA. The Utilities cannot wish this fact away by claiming that the fear is irrational, or by asserting that the psychological health damage is not "actual harm." (Utilities Br. at 20-21). Any health damage is "actual harm" cognizable under NEPA if it is related to the environment, as we have shown is the case here.

Indeed, the Licensing Board itself urged the Commission "to reject out of hand" arguments that this psychological health damage should be ignored because the underlying fears are irrational. The Board based that assertion on the simple fact that "the scheme of nuclear energy regulation assumes that commercial energy reactors are inherently dangerous but potentially safe." *Board Certification, supra* note 17, 11 N.R.C. at 304 (J.A. 39).

[58] The Commission also argues that the proposition that this psychological health damage is related to the potential for harm from a future

(footnote continued)

3. The measurability of psychological health damage is an issue for determination by the agency based on a factual record.

As did the dissent below (Pet. App. 40a-41a), the Utilities challenge the consideration of psychological health damage here on the ground that such damage is not adequately measurable to permit consideration by the Commission. (Utilities Br. at 27-28 & n.27).[59] They base this argument on three

---

(footnote continues)

accident is not within the scope of the issues that were before the Commission because the Commission referred only to psychological damage "unrelated directly to exposure to radiation." (NRC Br. at 44). But the Commission was referring to "*aspects of the Three Mile Island accident*" unrelated to radiation exposure. (J.A. 20). To the extent that it was excluding radiation exposure from consideration with respect to psychological health damage, it was excluding only the radiation exposure that occurred during the TMI-2 accident. Moreover, PANE's contention is cognizable under a separate provision of the Commission's order allowing arguments that the "short term actions" recommended as prior conditions for restart would not assure the "health and safety of the public" if restart were authorized (J.A. 19). Finally, the Commission's argument is inappropriately introduced at this stage of the litigation because our contention specifically raised the significance of the prospect of a future accident, and no party has argued that the contention was outside the scope of the Commission's order.

[59] It is significant that the Commission has not challenged the cognizability of psychological factors under NEPA on measurability grounds. (NRC Br. at 28 n.19, 39-40 n.28). Any such challenge would be disingenuous since the Commission has already, apparently of its own accord, examined the psychological impacts of another type of radiation disaster well before this case was decided below. *City of New York v. United States Dep't of Transportation*, 539 F. Supp. 1237, 1273 (S.D.N.Y. 1982). (Although DOT was the defendant, the psychological study was prepared for the NRC. *Id.* at 1244.) The Utilities appear to cite *City of New York* as similar to this case on the ground that it arguably involved agency evaluation of "public fears" (Utilities Br. at 25 n.25). The two, however, are unrelated. To the extent that *City of New York* required consideration of "public fears," it did so under a specific CEQ regulation concerning controversial federal actions affecting the environment, 40 C.F.R. § 1508.27(b)(4) (1982), which is not at issue here. Moreover, there was apparently no allegation of harm to human psychological health in that case, nor was there a previously traumatized population, as is true here. The "public fears" in *City of New York* would not be cognizable under NEPA under either the decision below in this case or the analysis presented in this brief.

cases that discuss "psychological factors" only in passing. They are *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir.), *cert. denied*, 412 U.S. 908 (1973) (*Hanly II*), and *First National Bank of Chicago v. Richardson*, 434 F.2d 1369 (7th Cir. 1973), both of which involved the siting of correctional facilities in cities, and *Maryland-National Capital Park and Planning Commission v. United States Postal Service*, 487 F.2d 1029 (D.C. Cir. 1973), which involved an influx of low-income workers into an area to staff a postal facility. Each of these courts expressed doubt whether psychological factors are sufficiently measurable to be considered under NEPA.

However, neither *Hanly II* nor *First National Bank of Chicago* turns on the deciding court's doubts about the measurability of psychological factors. In *Hanly II* the court explicitly stated that it would not decide the issue.[60] *Hanly II*, 471 F.2d at 833; *First National Bank of Chicago v. Richardson*, 484 F.2d at 1380 n.13. In each of these cases, the courts used the word "psychological" to refer loosely to vague assertions of community concern about the proposed facilities. Indeed, in the *Maryland-National Capital* case, the court's reference to "psychological factors" occurred in the context of a discussion of esthetic effects. *Maryland-National Capital*, 487 F.2d at 1038. These courts were not faced with and did not rule on whether any psychological health effects are cognizable under NEPA.

More important, and fundamental to administrative law and to NEPA, the question of whether psychological effects are measurable is one of fact. As a question of fact, it must be considered by the agency in the first instance. *Kleppe v. Sierra Club*, 427 U.S. 390, 413-14 & n.25 (1976). *See also, County of Suffolk v. Secretary of Interior*, 562 F.2d 1368, 1383 (2d Cir. 1977), *cert. denied*, 434 U.S. 1064 (1978). The Second Circuit applied this principle in *Chelsea Neighborhood Associations v. United States Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975), which was decided after the same court had expressed doubts about measurability in *Hanly II*. Recognizing the fundamental limitation on its role with respect to factual issues, the court

[60] Judge Friendly issued a strong dissent in *Hanly II*, contending that there is no reason for doubt that psychological effects should be considered, and arguing, on the basis of the statutory language, that they must be considered. 471 F.2d at 839.

squarely admitted that it did not "know whether informed social scientists would conclude that the top of the VMF would likely become a human jungle." Accordingly, it remanded the case to the agency to make that determination.[61]

To the extent that the decision in this case turns on a factual issue such as the measurability of the alleged psychological health damage, the same result must obtain. *Kleppe v. Sierra Club*, 427 U.S. at 410. The agency's factual decision will then be upheld if it is not arbitrary, *id.* at 413-14 & n.25. In any case, the judiciary may not usurp the role of the administrative agency in making factual findings.

The Utilities' reliance upon measurability is truly misplaced in the NEPA context. NEPA's implementation provisions are devoid of precise quantification requirements. The very point of the statute is to require federal agencies to gather whatever information is available concerning the environmental effects of their actions, and to take that information into account. All that is required is a reasonable effort to forecast the effects. *Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

In any event, the only fact finding body involved in this case has already ruled in favor of PANE on this issue. The Licensing Board found that PANE had "established a sufficient prehearing basis for the premise that the [psychological]

[61] The Utilities and their *amici* Edison Electric Institute and Scientists and Engineers for Secure Energy rely on an extensive line of cases for the proposition that the psychological health damage here is too remote and speculative to be considered by the Commission. (Utilities Br. at 35-36, EEI Br. at 15, SE_2 Br. at 11-12). Since the agency has done no factual analysis of the issue, these arguments seek a ruling that the health damage alleged here is too remote and speculative solely *as a matter of law*, just as the Utilities must be arguing that psychological effects are immeasurable as matter of law. This position is unsupportable. The cases cited by the Utilities and their *amici* are probably the single strongest line of authority in support of PANE's position on this issue. In each of them, one of two results obtained: either the agency decision not to consider alleged effects on the ground that they were too remote or speculative was upheld *on the basis of a factual record*, or the court directed the agency to develop such a record. No such record has been compiled in this case.

effects are measurable."[62] As discussed above, that determination must stand unless it is found to be arbitrary. No party has argued that the threshold ruling was arbitrary.[63]

---

[62] *Board Certification, supra,* note 17, 11 N.R.C. at 302 n.8 (J.A. 36 n.8). The Utilities and *amicus* SE_2 have emphasized that the Licensing Board held that it could not determine how evidence with respect to psychological health damage could be used in a "full blown cost-benefit analysis." However, there is no requirement for such an analysis, only for the best use of the available information. *See, e.g., Robinson v. Knebel,* 550 F.3d 422, 426 (8th Cir. 1977). Indeed, section 102(2)(B) of NEPA, 42 U.S.C. § 4332(2)(B), specifically recognizes that many "environmental amenities and values" are not quantifiable in the usual sense. Under that provision, and under NEPA as a whole, agencies are nonetheless required to take such environmental concerns into account. Agencies need only give those concerns "appropriate consideration," since conventional quantification is not possible.

[63] As noted, this was a threshold determination for the purpose of determining whether the facts should be litigated further. In the remanded proceeding, PANE would expect to submit evidence showing, first, that restart of TMI-1 would cause further harm to psychological health, and second, that the harm would be severe.

PANE would rely upon the sort of scientific evaluations that support the conclusions of the President's Commission, *supra* note 3, and that are described in the *amicus* brief of the American Psychological Association. *See also* Comment, *Negligently Inflicted Mental Distress: The Case for an Independent Tort,* 59 Geo. L.J. 1237 (1971); and Comment, *Neurosis Following Trauma: A Dark Horse in the Field of Mental Disturbance,* 8 Cum. L. Rev. 495 (1977) (both discussing the justiciability of psychological damage, particularly with respect to post-traumatic conditions similar to those alleged here).

Contrary to the assertions of the Utilities and *amicus* SE_2 (Utilities Br. at 35, SE_2 Br. at 29), this is precisely the kind of case in which it is well within the competence of the scientific community to make a reasonable prediction of the reaction of a population to an impending event. The current psychological condition of those individuals traumatized by the accident at TMI-2 is the same as or similar to "post-traumatic stress disorder." *DSM-III, supra* note 35 at 236-37. Those affected by this type of condition may be expected to suffer further trauma from an event such as the restart of TMI-1. PANE has already submitted two evaluations on this point to the Commission since the original judgment was issued by the court below. *See* R. Holt, Ph.D., A Selective Review of Research on Health Effects of the Accident at Three Mile Island, *and* J. L. Titchener, M.D., Report of the University of Cincinnati Study of the Psychological Impact and Long-Term Consequences of the Accident at Three Mile Island. Both studies were filed with the Commission on May 12, 1982.

The Licensing Board's decision that PANE's contentions met the measurability threshold is an administrative judgment about the requirements for participation in an agency proceeding. Judicial review of such procedural decisions by the agency is strictly limited. *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 553-54 (1978).

II. NEPA's Inherent Statutory Limitations and the Breadth of Agency Discretion in its Implementation Assure No Unduly Broad or Burdensome Application of the Decision Below.

Petitioners suggest that the decision below to require the consideration of potential psychological health damage in this case would also apply to a wide range of federal actions, pose an undue burden on federal agencies, and require the permanent shutdown of TMI-1. These arguments ignore the explicit limitations of NEPA and the extremely broad range of agency discretion in evaluating environmental concerns and taking them into account in decisionmaking.

A. The threshold requirement for significant environmental effects inherently limits the application of section 102(2)(C) of NEPA.

The Commission argues that the decision below treats "any and all health effects as environmental impacts," such that NEPA could be extended to drug approval actions of the Food and Drug Administration, the termination of government health support systems and a range of other federal activities. (NRC Br. at 28). This argument ignores the factual context in which the decision was reached.

The court below did not rule in a vacuum, but in the context of the environment that PANE had alleged and argued had been created "in the area surrounding the reactors at Three Mile Island." (Br. for Petitioner below at 42). Thus, the court limited its ruling to the particular health effects arising among the "neighboring residents" of the Three Mile Island area. (Pet. App. 16a). Although the "potential effect on health," *id.* is, indeed, the key to the decision below, there is nothing in the

opinion to suggest that a health effect, *per se*, independent of an environmental nexus, would be cognizable under NEPA.

The decision below is consistent with the explicit limitations contained in section 102(2)(C), which establishes two threshold tests that limit the scope of the decision and of section 102(2)(C) itself. First, there must be an effect on "the quality of human environment." Second, the effect must be significant. These tests, rather than the tautological construction urged by the Commission ("physical and natural environment"), are the explicit limiting principles of NEPA.

Because NEPA requires an effect on the environment, in this case the environment surrounding the reactors at Three Mile Island, claims involving drug approval and suspension actions by the FDA would not fall under NEPA.[64] The health impact of such a decision is not related to any particular geographical area, whether local or nationwide; it is not inherent in the human surroundings. Whereas an individual may choose whether or not to take a drug, and thus whether to risk health damage, an individual may not, short of leaving the environment, choose whether to be harmed by threats inherent in the environment. As we have shown, the purpose of NEPA is to protect the viability of the environment so that it can continue to support healthy human existence and need not be abandoned.

The limitation to an effect on the human surroundings also eliminates NEPA claims with respect to decisions to cut funding for government health services. (NRC Br. at 28). Although those decisions may relate to particular geographic areas, they do not affect the inherent nature of the surroundings in those areas such that health would be harmed simply by virtue of the cutback. Any harm to health would have some cause other than reduction of funding for health services in the particular surroundings. The cutback would constitute a federal decision

---

[64] We note that FDA regulations do require the preparation of NEPA analyses with respect to drug approval actions where those actions may significantly affect the human environment. 21 C.F.R. Part 25 and § 25.1(f)(1).

not to act, to which NEPA does not apply. *Defenders of Wildlife v. Andrus,* 627 F.2d 1238, 1244 (D.C. Cir. 1980).[65]

While the environmental effect test provides some guidance, the limitation to a significant effect was specifically intended by Congress to assure the manageable implementation of NEPA. An earlier version of what is now section 102(2)(C) referred to "significant Federal actions affecting the quality of the human environment." In an effort to narrow NEPA's application, the Bureau of the Budget, representing the President, proposed the significance limitation that now appears in the statute.[66] The Senate Committee specifically adopted that proposal.[67]

The first question under the significance test is whether the alleged effect is significant in terms of the goals and purposes of the statute. *Philbrook v. Glodgett,* 421 U.S. at 713. *Cf., First National Bank of Chicago v. Richardson,* 484 F.2d at 1373 (recognizing the significance test as partly an issue of law). If it is not, it is not cognizable under NEPA as a matter of law. The agency need undertake no further consideration of the issue. Thus, moral or spiritual "effects" of federal actions (NRC Br. at 31), even if somehow related to particular environments, are not cognizable under NEPA because those concerns are not central to the purpose of the statute. For the same reason, strictly social and economic effects, or effects involving the relationships among groups of people, such as those addressed in several cases cited by petitioners,[68] do not trigger the requirement for an environmental impact statement.

Only if the effect of a federal action is related in some way to the environment and is significant in terms of the goals and purposes of the statute would an agency be required to

---

[65] Moreover, the FDA example, as well as any other governmental decisions involving agencies directly responsible for protecting human health, may also be excluded from NEPA on the ground that the protection they provide is exactly what NEPA would accomplish in safeguarding human health. *See, e.g., Environmental Defense Fund v. Environmental Protection Agency,* 489 F.2d 1247 (D.C. Cir. 1973).

[66] S. Rep., *supra* note 33 at 27-30, 40-41.

[67] *Id.* at 11.

[68] *See* discussion, *supra* at 28 note 50.

undertake a factual analysis. As we discuss below, even then the agency has considerable discretion in pursuing that task, and its decision is subject to a narrow, highly deferential standard of review.

B. NEPA's fundamentally procedural mandate minimizes any burden of implementation.

According to the Utilities, the decision below implies that the Commission "could not license a plant otherwise found safe if some local residents have conceived a fear and distrust of nuclear power that is sufficiently severe and intense." (Utilities Br. at 40).[69] This assertion is nonsense. The Utilities have identified nothing in the decision below that supports this interpretation; the decisions of this Court firmly establish the contrary.

The most that can be said of the decision below is that it could result in an agency decision that an environmental impact statement should be prepared. Once the statement is completed, however, nothing in NEPA would actually require the Commission to prevent the restart of TMI-1 if the Commission, in its discretion, did not wish to do so.

> On the contrary, once an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to insure that the agency has considered the environmental consequences; it cannot " 'interject itself within the area of discretion of the executive as to the choice of the action to be taken.' "

Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227-28 (1980), quoting *Kleppe v. Sierra Club,* 427 U.S. at 410 n.21. [70]

This legal principle governs every possible stage of the Commission's consideration of psychological health damage in

---

[69] *See also* Utilities Br. at 34, where it is suggested that the decision below would require the Commission "to override sound technical judgments, congressionally determined to be in the Nations's best interest, because of irrational, albeit genuine, fears and anxieties."

[70] We note that even Commissioner Bradford, who most strongly supported consideration of psychological health damage, expressed doubt that the actual restart of TMI-1 would hinge on this issue. (Pet. App. 93a).

this case. The immediate requirement is that the Commission determine whether the potential psychological health impacts of restart are significant, such that an environmental impact statement must be prepared. 40 C.F.R. § 1501.4 (1982). Although PANE would attempt to show otherwise, the Commission could determine that no EIS is required because, for example, (1) the probable psychological health impact of restart would not be significant as a matter of fact, (2) there is no psychological health impact, or the alleged impact is so remote or speculative that it could not usefully be considered in an EIS, or (3) the alleged psychological health impact could not, as matter of fact, be measured in a way that would allow either a determination of its significance or the useful consideration of the available information in reaching the ultimate decision. Any of these decisions, and any others the Commission might reach, would be upheld if they were reasonable. *Carolina Environmental Study Group v. United States,* 510 F.2d at 796, 798 (D.C. Cir. 1975).

If the Commission decided to prepare an EIS, the standard of review would again be very narrow. As long as the Commission had carefully examined the allegation and fairly considered the available information, the EIS itself would withstand judicial review.[71] *National Helium Corp. v. Morton,* 486 F.2d 995, 1001-05 (10th Cir. 1973). Moreover, given the limited standard of review, PANE would be strongly discouraged from seeking judicial involvement if the Commission considered the available information.

Finally, as we have noted, the decision below does not bind the Commission to use any particular procedures in considering this issue. That question is now before the Commission itself, whose choice of procedures would, again, be entitled to considerable deference. *Vermont Yankee Nuclear Power Corp. v. NRDC,* 435 U.S. at 553-54.

---

[71] The Commission is incorrect in suggesting that the requirement to consider psychological health damage would somehow threaten the "hard look" principle. (NRC Br. at 4). The issue is the same as any other in which potential human health impacts are to be evaluated using available scientific information and expertise.

C. The narrow scope of the decision below and the breadth of agency discretion minimize the burden of considering psychological health damage allegations in other situations.

The decision below is narrowly drawn, recognizing the application of NEPA to the alleged psychological health impact of a federal action only where there has been a previous traumatic event, and where there are "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." (Pet. App. 16a-17a). Only the circumstance at Three Mile Island meets these criteria, and the Commission itself has issued a Statement of Policy interpreting the decision below as applying only to comparable situations in which an accident has occurred.[72]

In addition to the narrowness of the decision itself, the Commission and any other federal agency to which such an issue might be raised has the discretion to rely upon reasonable threshold requirements to weed out insubstantial claims. This Court has itself emphasized that agencies may require

> intervenors who wish to participate to structure their participation so that it is meaningful, so that it alerts the agency to the intervenor's position and contentions. This is especially true when the intervenors are requesting the agency to embark upon an exploration of uncharted territory . . . .

Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. at 553. As *amicus* SE_2 has suggested, the agency may require a showing that an allegation such as PANE's contention is "susceptible of a reasonable degree of proof."[73]

---

[72] 47 Fed. Reg. 31,762-63 (1982). The Commission's effort to disavow that Statement of Policy (NRC Pet. at 27-28 n.22) raises serious questions about the genuineness of its implemention of judicial decisions with which it disagrees. If the Commission honestly believed that the decision below must be widely applied, ethical and legal considerations would require that it implement the decision according to that belief.

[73] SE_2 Br. at 11. *Amicus* SE_2 attempts to argue that PANE's contention should be excluded from consideration on such a threshold test. But PANE passed the only threshold test applied by the Commission when the Licensing Board ruled that PANE had made a sufficient pre-hearing showing with respect to measurability. (J.A. 36 n.8). There has been no challenge to this ruling, so SE_2's argument must fail.

The Licensing Board did exactly that here, and PANE's contention met the test. The Commission or any other federal agency could apply a more stringent test in the future, particularly where the allegation involved "uncharted territory." This test could involve both an examination of the adequacy of the allegation itself and a requirement, such as that imposed by the Licensing Board here, that an initial factual showing accompany the allegation. In either case, an agency decision to accept or reject the allegation on the basis of such a test would, once again, be entitled to substantial deference. *Vermont Yankee Nuclear Power Corp. v. NRDC,* 435 U.S. at 553-54.

In its recent policy statement, issued pursuant to the decision below, the Commission adopted the threshold test of requiring a related pre-existing trauma in an area before it will consider a psychological health contention. 47 Fed. Reg. 31,762 (1982). This is a reasonable threshold since it is true that the examination of psychological health matters is not simple, and even knowledgeable experts have limited ability to make reliable predictions. One of the few situations in which such predictions are reasonable is that presented here—the existence of a previously traumatized population faced with a proposed federal action closely related to the cause of the original trauma. The pre-existing trauma provides a reasonable starting place for analysis, eliminating the vast majority of claims, yet reflecting the state of scientific knowledge and ability today.

Finally, even if the Commission were required to consider psychological health damage with respect to all of its licensing decisions, an action clearly not required by a reasonable reading of the decision below, the administrative burden would be minimal. The Commission clearly has the authority to undertake a generic examination of an issue of that sort. *State of Minnesota v. Nuclear Regulatory Commission,* 602 F.2d 412, 416 (D.C. Cir. 1979); *Vermont Yankee Nuclear Power Corp. v. NRDC,* 435 U.S. at 518. It could do so here. The only available information involves the population at Three Mile Island. Once the Commission had gathered and analyzed that information, it would need only to provide a thirty day period for public

comment before issuing a final rule applicable to all proceedings. That rule would be entitled to substantial deference as long as the required procedures had been followed.

* * * * *

In closing, we emphasize that this case involves a narrow question of interpretation of section 102(2)(C) of the National Environmental Policy Act. That section establishes a specific analytical framework with the following threshold questions: first, whether a federal action affects the quality of the human environment or surroundings, and second, whether the effect of the federal action is significant under the goals and purposes of NEPA. The psychological health damage at issue here meets both of those tests.

Most important, this case does not involve an attack on nuclear power in general. As this Court has held, Congress has chosen to try nuclear energy, and the courts may not contravene that decision. *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. at 557-58. Similarly, Congress has chosen, through NEPA, to require federal agencies to consider all threats to human health, including psychological health, that may result from their actions affecting the quality of the human environment. Only Congress has the authority to alter that mandate.

CONCLUSION

For the foregoing reasons, the judgment of the court of appeals should be affirmed.

Respectfully submitted,

WILLIAM S. JORDAN, III
Counsel of Record

LEE L. BISHOP
DIANE CURRAN
GAIL M. HARMON
HARMON & WEISS
1725 I Street, N.W.
Suite 506
Washington, D.C. 20036
(202) 833-9070

Attorneys for Respondents
People Against Nuclear Energy

January 29, 1983

Counsel for respondent acknowledge the assistance of Mary Elizabeth Nelson, a law student intern, in the preparation of this brief.

APPENDIX A

Sections 2, 101 and 102 of the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321, 4331 and 4332 provide as follows:

> Section 2, 42 U.S.C. § 4321: The purposes of this chapter are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.
>
> Section 101, 42 U.S.C. § 4331: (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.
>
> (b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs,

and resources to the end that the Nation may

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Section 102, 42 U.S.C. § 4332:

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which will insure that

presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) The responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by subchapter II of this chapter.

APPENDIX B

PANE CONTENTION NO. 1:

1) Renewed operation of Three Mile Island, Unit 1 (TMI-1) would cause severe psychological distress to PANE's members and other persons living in the vicinity of the reactor. The accident at Unit 2 has already impaired the health and sense of well being of these individuals, as evidenced by their feelings of increased anxiety, tension and fear, a sense of helplessness and such physical disorders as skin rashes, aggravated ulcers, and skeletal and muscular problems. Such manifestations of psychological distress have been seen in the aftermath of other disasters. The possibility that TMI Unit 1 will reopen severely aggravates these problems. As long as this possibility exists, PANE's members and other persons living in the communities around the plant will be unable to resolve and recover from the trauma which they have suffered. Operation of Unit 1 would be a constant reminder of the terror which they felt during the accident, and of the possibility that it will happen again. The distress caused by this ever present spectre of disaster makes it impossible for the NRC to operate TMI-1 without endangering the public health and safety.

APPENDIX C

EXECUTIVE OFFICE OF THE PRESIDENT

COUNCIL ON ENVIRONMENTAL QUALITY

722 Jackson Place, N.W.
Washington, D.C. 20006

February 14, 1980

Donald E. Hossler
501 Vine Street
Middletown, PA. 17057

Dear Mr. Hossler:

I am writing on behalf of the Chairman in response to your letter of December 14, 1979, concerning the decontamination of Three Mile Island. I regret the delay in responding to you, but we have no record of receiving your initial letter. You made several inquiries in that letter concerning the Council's role in the Nuclear Regulatory Commission's preparation of a programmatic impact statement to assess the TMI cleanup. Your questions and our responses are as follows:

> "What specific types of things will CEQ be doing regarding TMI cleanup?"

The Council, of course, will not be involved in any way with the actual cleanup of the TMI facilities. Pursuant to its authority under the National Environmental Policy Act, the Council will, upon request, advise the NRC as to how to prepare an adequate environmental impact statement. Council staff members recently toured the facility to better understand the problems confronting local, state and federal officials. The Council also has responded to the NRC's recent inquiries concerning the Council's regulations on the scoping process for the preparation of draft EISs.

> "2. What specific information will CEQ use to make decisions?"

CEQ is not authorized by statute to make decisions in this area. We will make available our expertise in complying with environmental laws. We anticipate that most of the inquiries by the NRC will be legal in nature, requiring the Council to use its own regulations, NEPA and interpretive caselaw for the development of responses.

> "3. Are you concerned with technical data only, or do you consider psychological feelings not necessarily quantified but known also?"

NEPA requires a thorough consideration by agencies of the significant direct, indirect and cumulative impacts of their proposed actions on the human environment. The Council's regulations specifically reiterate this principle. 40 C.F.R. §§ 1502.16, 1508.8, 1508.14. For the purposes of NEPA, "effects on the human environment" include the full range of potential health effects on human beings.

Please contact the Council again in the future if any new questions arise concerning our involvement at Three Mile Island.

Sincerely,

(signed)

JOHN SHEA, III
Counsel

cc: Senator John Heinz, III

Office-Supreme Court, U.S.
FILED
FEB 22 1983
ALEXANDER L. STEVAS,
CLERK

No. 81-2399, No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY,
and PENNSYLVANIA ELECTRIC COMPANY, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and THE UNITED STATES OF AMERICA, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

On Writs Of Certiorari To The United States Court Of Appeals For The District Of Columbia Circuit

REPLY BRIEF FOR PETITIONERS METROPOLITAN EDISON COMPANY, ET AL.

JAMES B. HAMLIN
Counsel of Record
GEORGE F. TROWBRIDGE
JOHN B. RHINELANDER
DEBORAH B. BAUSER
SHAW, PITTMAN, POTTS & TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Attorneys for Petitioners Metropolitan Edison Company, et al.

Of Counsel:
JAMES B. LIBERMAN
DEBEVOISE & LIBERMAN
26 Broadway
New York, NY 10004
(212) 248-6900

February 22, 1983

PRESS OF BYRON S. ADAMS PRINTING, INC., WASHINGTON, D.C.

TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	i
TABLE OF AUTHORITIES	ii
ARGUMENT	2
I. PANE Has Shown No Environmental Nexus Between Psychological Distress And Operation Of TMI-1	2
II. The Potential For An Accident At TMI-1 Was Thoroughly Considered By The NRC	5
III. The Lower Court Precedent Does Not Support PANE's Position	8
IV. The Difficulties Inherent In Predicting Stress Cannot Be Ignored In Deciding This Case	12
CONCLUSION	19

TABLE OF AUTHORITIES

CASES: Page

Carolina Environmental Study Group v. United States, 510 F.2d 796 (D.C. Cir. 1975) 7

Chelsea Neighborhood Associations v. United States Postal Service, 516 F.2d 378 (2d Cir. 1975) 10, 11

Como-Falcon Coalition, Inc. v. United States Department of Labor, 465 F. Supp. 850 (D. Minn. 1978), *aff'd*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980) 11

Hanly v. Mitchell, 460 F.2d 640 (2d Cir.), *cert. denied*, 409 U.S. 990 (1972) ("*Hanly I*") 8-9, 11, 12

Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) ("*Hanly II*") 8, 9, 10, 12, 15

Maryland-National Capital Park & Planning Comm'n v. United States Postal Service, 487 F.2d 1029 (D.C. Cir. 1973) 14, 15

Porter County Chapter of the Izaak Walton League v. AEC, 533 F.2d 1011 (7th Cir.), *cert. denied*, 429 U.S. 945 (1976) 7

Power Reactor Development Co. v. International Union of Electrical, Radio & Machine Workers, 367 U.S. 396 (1961) 5

Scientists' Institute for Public Information, Inc. v. AEC, 481 F.2d 1079 (D.C. Cir. 1973) 14

MISCELLANEOUS:

10 C.F.R. Part 2 (1982) 18

Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969, 45 Fed. Reg. 40,101 (June 13, 1980) 6, 7

Proceedings of the Workshop on Psychological Stress Associated with the Proposed Restart of Three Mile Island, Unit 1, NUREG/CP-0026 (April 1982) 13, 16, 17

American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (3d ed. 1980) .. 12-13

R. Holt, A Selective Review of Research on Health Effects of the Accident at Three Mile Island (undated) 13

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399, No. 82-358

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY,
and PENNSYLVANIA ELECTRIC COMPANY, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and THE UNITED STATES OF AMERICA, *Petitioners*,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*, *Respondents*.

On Writs Of Certiorari To The United States Court Of Appeals For The District Of Columbia Circuit

---

REPLY BRIEF FOR PETITIONERS METROPOLITAN EDISON COMPANY, ET AL.

Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company, petitioners in No. 81-2399 (hereinafter "Public Utilities"),[1] submit this reply brief in response to the brief

---

[1] In compliance with Supreme Court Rule 28.1, the parent and affiliate corporations of the Public Utilities were listed on page i of their petition for a writ of certiorari.

on the merits filed by respondent People Against Nuclear Energy ("PANE").

ARGUMENT

I. PANE Has Shown No Environmental Nexus Between Psychological Distress And Operation Of TMI-1

PANE's brief goes through a series of verbal gymnastics in an attempt to demonstrate some environmental nexus between the psychological stress it alleges and operation of TMI-1. The effort merely confuses the facts and muddles the issues actually presented by this case. PANE concedes that NEPA does not apply to "a health effect, *per se*, independent of an environmental nexus" and that the health effect somehow must be "environmentally generated." PANE Brief at 38, 21. In order to meet this requirement, PANE defines "environment" as the geographic area surrounding Three Mile Island" (*id.* at 25), and it argues that restart of TMI-1 will change this environment by renewing the "potential for a nuclear accident and further exposure to radiation." *Id.* at 23. PANE believes that this "potential" constitutes the "physical reality" and "inherent nature" of the environment (*id.* at 29, 38), and that the potential will "cause the local environment to threaten human health." *Id.* at 15. This threat arises through "the initial fear reaction" in PANE's members, leading to "severe" psychological health damage. *Id.* at 21. PANE disavows any desire to evaluate "fears or perceptions" in and of themselves, and it argues that fears and perceptions are relevant only as the "immediate causal link between the alteration of the human environment at TMI and the resulting health damage." *Id.* at 20. Nevertheless, the causal link provided by these fears and perceptions is so strong that PANE cannot "imagine a tighter chain of proximate cause between the effect on the physical environment and the damage to human health." *Id.* at 31.

To say that this case involves an "effect" on the "physical reality" of the "environment" is to give those words an entirely new meaning. Everyone agrees that we are *not* concerned here with the actual physical impacts of normal reactor operation, such as release of low-level radiation, discharges of heated water, local fogging caused by the cooling towers, and the like. Those impacts were thoroughly considered in the environmental impact statement ("EIS") prepared at the time TMI-1 was initially licensed and again during the restart proceeding in the environmental impact appraisal ("EIA"). *See* Joint Appendix (J.A.) at 48-87. The EIA concluded, of course, that renewed operation of TMI-1 would not result in any significant impacts beyond those previously considered in the EIS. PANE makes no attempt to link its alleged psychological distress with these physical impacts of normal operation.

Nor does this case concern the actual danger of an accident at TMI-1. The prospects for an accident were thoroughly considered at the time TMI-1 was licensed and again during the restart proceeding. Indeed, the whole purpose of the restart proceeding was to consider the potential for another accident like the one that occurred at TMI-2 and to apply to TMI-1 the lessons learned from the accident. Yet PANE declined to participate in this exhaustive consideration of the actual risk of an accident. In fact, it is PANE's view that the actual safety of TMI-1 is irrelevant to its psychological stress contentions in this case. *See* PANE Brief at 30 n.53.

Thus there is no nexus with the physical impacts of normal operation or with the actual risk of an accident at the plant. When PANE speaks of the "potential" for an accident, it can only be referring to the potential as it is

feared or *perceived* by PANE's members.[2] This perceived potential cannot be characterized, in any meaningful sense, as the "physical reality" or "inherent nature" of the environment surrounding TMI-1.

Similarly peculiar is PANE's suggestion that the environment will be changed in a way that will cause it "to threaten human health." The environment around TMI-1 after restart will be no more "threatening" than it was while TMI-1 was in operation before the accident. The only change is in the state of mind of PANE's members, and the threat to their psychological health, if any, comes from their own fears and perceptions, not from the environment in which they live. Unless the human mind is to become the "environment" for NEPA purposes, it cannot be said that the stress alleged here is "environmentally generated."

When the elaborate legal formulations are stripped away, this case is really quite straightforward. PANE's members are afraid of an accident at TMI-1, yet they declined to participate in an exhaustive proceeding designed to ensure that the actual risk of such an accident is acceptably low. Instead, they would have the NRC analyze and evaluate the effects of their fears and perceptions in and of themselves, wholly apart from the actual risk involved. NEPA was never intended to require any such analysis.

---

[2] PANE's *amicus*, the American Psychological Association ("APA"), confirms that psychological stress "results from a person's *perception* of his environment." APA Brief at 4 (emphasis added). The stress bears no necessary relationship to the physical reality of the environment.

II. The Potential For An Accident At TMI-1 Was Thoroughly Considered By The NRC

PANE asserts that it is the Public Utilities' position that an accident like the one at TMI-2 "could not occur again" and that therefore "the potential for such an accident should not be considered in deciding whether TMI-1 should be restarted." PANE Brief at 31; *see also id.* at 32 n.57. This is a gross mischaracterization of our views and is directly contrary to the actual facts of this case. No one can absolutely guarantee that an accident will never occur at a nuclear power plant. But no such guarantee is required. The NRC fulfills its statutory obligations if it finds reasonable assurance that the plant can be operated without undue risk to the health and safety of the public. *See Power Reactor Development Co. v. International Union of Electrical, Radio & Machine Workers*, 367 U.S. 396 (1961). To that end, the NRC conducts an exhaustive safety review of each nuclear plant, including an analysis of the likelihood and consequences of various types of accidents. TMI-1 was subjected to such a safety review at the time it was initially licensed. During the restart proceeding the safety of TMI-1 was again considered, with particular focus on the likelihood of another accident like the one that occurred at TMI-2 and the measures taken to prevent a repetition.

Neither the NRC nor the Public Utilities have *ever* argued that the potential for an accident should be ignored in deciding whether to restart TMI-1. To the contrary, it is our position that if PANE was truly concerned about the actual safety of TMI-1, it could have participated in the restart proceeding, aired its concerns, and assisted the NRC in determining whether there is reasonable assurance that the plant can be operated safely. Yet PANE has steadfastly refused to participate in this process, preferring instead to litigate its fear of an

accident without regard to the actual safety of the plant. The Public Utilities' position on this issue is simple: The actual safety of TMI-1 should be, and has been, considered by the NRC; PANE's perceptions and fears about the safety of the plant should not be considered.

PANE's *amicus* Union of Concerned Scientists ("UCS") launches a similar attack against the NRC, arguing that the Commission proposes to allow restart of TMI-1 without a full public airing of the potential for another accident. UCS Brief at 6.[3] UCS seeks to buttress its argument by reference to a recent NRC Policy Statement governing the treatment of so-called "Class 9" accidents in the EIS's prepared for nuclear power plants. *See* Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969, 45 Fed. Reg. 40,101 (June 13, 1980). UCS' presentation confuses the issues presented here and requires clarification.

The NRC has *always* considered the probability and consequences of accidents in its NEPA impact statements for nuclear plants. For example, in the EIS for TMI-1 and TMI-2 the NRC considered a broad range of accidents grouped into classes according to probability and severity, including some accidents with off-site radiological consequences more serious than those expe-

---

[3] The UCS brief is for the most part an attempt to prove that the TMI-2 accident was a serious one. No one has ever disputed that the accident was serious. *See* Public Utilities Brief at 3. The only point made by the Public Utilities was that any stress in the surrounding population was caused primarily by erroneous information concerning the hydrogen bubble and supposedly high radiation releases, not by the release of dangerous quantities of radioactive material. Public Utilities Brief at 4. UCS' focus on the accident scenario, including events that might have but did not occur and were unknown to the public, is irrelevant for purposes of this case. Such information could not have caused stress.

rienced in the TMI-2 accident.[4] Until 1980, however, the NRC's EIS's did not consider in any great detail a category of very serious accidents known as Class 9 accidents, which were thought extremely unlikely to occur. The NRC's practice of omitting detailed consideration of Class 9 accidents was approved by the courts. *Porter County Chapter of the Izaak Walton League v. AEC*, 533 F.2d 1011, 1017-18 (7th Cir.), *cert. denied*, 429 U.S. 945 (1976); *Carolina Environmental Study Group v. United States*, 510 F.2d 796, 799-800 (D.C. Cir. 1975).

In its 1980 Policy Statement, the Commission prospectively reversed its practice with respect to Class 9 accidents. Thereafter, the mathematical probability and the consequences of such accidents were to be considered in NEPA impact statements, but only for proceedings in which the EIS had not already been issued. *See* 45 Fed. Reg. at 40,103. Because the EIS for TMI-1 had already been issued years earlier and because the potential for serious accidents had been thoroughly considered in the TMI-1 restart proceeding, the NRC did not prepare a new or supplemental EIS discussing Class 9 accidents at TMI-1. Nevertheless, the EIA prepared by the NRC during the restart proceeding did discuss Class 9 accidents, including the Commission's Policy Statement and the evidence presented at the hearing on this subject. J.A. 58-60. The NRC testimony at the hearing was described as follows:

> Staff members Jack Rosenthal and Paul S. Check prepared testimony, presented at the hearings on January 28, 1981, which showed, using Class 9 acci-

---

[4] *See* NRC, Final Environmental Statement Related to the Operation of Three Mile Island Nuclear Station, Unit 2, NUREG-0112, at 7-1 to 7-6 (Dec. 1976); NRC, Final Environmental Statement Related to Operation of Three Mile Island Nuclear Station, Units 1 and 2, at VI-1 to VI-10 (Dec. 1972) (attached as Appendix B to NUREG-0112).

> dent scenarios, design basis events, credible vs. incredible events and deterministic vs. probablistic reviews (including safety goals), that the design of nuclear power reactors provides protection against a range of Class 9 accidents and that protection has been provided for TMI-1 for those events with nexus to the TMI-2 event.

J.A. 59-60. The NRC Appeal Board has recently issued an opinion sustaining the decision not to prepare an EIS covering Class 9 accidents. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), ALAB-705 (Dec. 10, 1982).[5]

Thus there *has* been a full public airing of the potential for serious accidents at TMI-1, including Class 9 accidents. It is highly misleading to suggest that the NRC is attempting to sweep this issue under the rug and allow restart of TMI-1 without an adequate review of all pertinent safety issues.

III. The Lower Court Precedent Does Not Support PANE's Position

PANE's reliance on several decisions by the circuit courts of appeals is entirely misplaced.

Notwithstanding PANE's suggestion to the contrary,[6] the decisions by the Second Circuit in *Hanly v. Mitchell*,

---

[5] In any event, PANE never contended below that Class 9 accidents should have been considered in a formal EIS. Thus the issue of Class 9 accidents is not properly before this Court.

[6] *See* PANE Brief at 27-28. Previously, PANE distinguished the *Hanly II* case from the present controversy on the ground that *Hanly II* did not involve allegations of "actual damage to human psychological health." PANE Brief in Opposition to Petitions for Writs of Certiorari at 34. At that time, PANE acknowledged that the Second Circuit had questioned whether "vague psychological considerations" such as general concern or uneasiness are cognizable under NEPA. *Id.*

460 F.2d 640 (2d Cir.), *cert. denied*, 409 U.S. 990 (1972) (*"Hanly I"*), and *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) (*"Hanly II"*), actually demonstrate that psychological distress based upon individuals' fears and perceptions is not cognizable under NEPA. In *Hanly I*, the court found that the "terse" one or two page memorandum prepared by the General Services Administration ("GSA") failed to satisfy the agency's obligation under NEPA to take a "hard look at the peculiar environmental impact of squeezing a jail into a narrow area [in Manhattan] directly across the street from two large apartment houses." 460 F.2d at 646. The court found that some of plaintiffs' expressed concerns, *e.g.*, increased noise and traffic, inmate demonstrations and an increased availability of drugs in the neighborhood, "all affect the urban 'environment' and are surely results of the 'profound influences of . . . high-density urbanization [and] industrial expansion.' Section 101(a) of the Act, 42 U.S.C. § 4331(a)." *Id.* at 647. Although not the traditional environmental assets such as forests, lakes and wildlife, the factors that the court found cognizable under NEPA were the *actual* attributes of the urban area at issue in *Hanly I*.

Thus, in *Hanly I* the underlying environmental bases for city residents' fears and concerns had to be evaluated by GSA in determining whether an EIS for the proposed jail was required by NEPA. In the present case, the underlying bases for PANE's concerns—the impact on health and safety of operating TMI-1—have been analyzed in exhaustive detail in an extraordinarily lengthy public adjudicatory hearing. In contrast to what PANE would require of the NRC here, the agency in *Hanly I* was not required to analyze the feelings of neighboring residents about the federal project in question.

The court in *Hanly II* found GSA's new twenty-five page environmental review for the most part satisfactory. However, it required GSA to go back and include in the assessment an analysis of the potential for a rise in crime in the neighborhood, an issue overlooked by GSA in its rewritten environmental report. While PANE valiantly attempts to bring its facts within the analytical rubric of the *Hanly II* case, the fact remains that the Second Circuit did not require GSA to assess people's fears about crime; rather, the agency was told to evaluate the actual safety issue of crime incidence attributable to the construction and operation of the prison in the neighborhood. The latter issue is an actual urban phenomenon that the court thought attributable to the presence of the jail in the community. The former issue, in the words of *amicus* APA, "results from a person's perception of his environment," and not from the environment itself. APA Brief at 4. In sum, contrary to PANE's assertion, the lesson to be learned from *Hanly II* is that psychological stress is not an environmental impact cognizable under NEPA.[7]

PANE also relies upon the Second Circuit's decision in *Chelsea Neighborhood Associations v. United States Postal Service*, 516 F.2d 378 (2d Cir. 1975). In *Chelsea*, the court disagreed with the Postal Service's position that

---

[7] PANE also summarily distinguishes a series of NEPA cases concerning so-called "secondary impacts" on the theory that "[n]one of these cases presents a fact situation at all similar to that now before the Court." PANE Brief at 29 & n.51. Of course, PANE is simply ignoring the rule adopted in those cases, namely, that any agency need not consider the indirect effects of a major federal action absent a direct—often termed "primary"—impact on the physical environment. If such indirect impacts do not trigger NEPA's EIS requirement, surely PANE's admittedly "indirect" claim is not within NEPA's bounds. PANE Brief at 11. PANE also notes that "none of

it was either exempt from NEPA or had already prepared a sufficient EIS in connection with a proposal to build a huge multi-story postal garage in Manhattan, on top of which would sit a multi-story housing project. While the court found that the environmental impacts of the proposed garage had been comprehensively assessed, the impacts of the housing project had not. Neither had the Postal Service addressed the impact of building the garage and not the housing project, although the latter was presented in the EIS as the major community benefit of the proposed project. In addition, the EIS failed to discuss alternatives comprehensively. Relying on its holding in *Hanly I*, the court focused particularly on the absence of any discussion in the EIS of such "human factors" as crime. Insofar as the court was concerned about the effect on the housing project's occupants of "living at the top of an 80-foot plateau," this stemmed from the hypothesis that if these people were isolated from the rest of the community, the housing project could become a "human jungle," which would "exacerbate the predicted rise in crime." 516 F.2d at 388. In *Chelsea* the court did *not* require the agency to analyze the stress of neighborhood residents produced by their perceptions and apprehensions about the project. *See also Como-Falcon Coalition, Inc. v. United States Department of Labor*, 465 F. Supp. 850, 861 (D. Minn. 1978), *aff'd*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980) (fears of increased crime from the establishment of a Job Corps center are

---

these cases involves a federal action that would fundamentally change the physical reality of the surrounding environment." *Id.* at 29. But neither does the normal operation of TMI-1. As discussed above, this case does not involve any change in the "physical reality of the surrounding environment." The change is not in the environment, but in the minds of some individuals who will be distressed if TMI-1 is allowed to operate.

not cognizable under NEPA since "[t]he incidence of crime as an environmental impact cannot be determined by a comparison of emotional fervor").

In summary, the case law ran decisively against PANE's position until the court below decided this case. Even Judge Wright could find no support in these cases, and he simply distinguished them as involving mere "socioeconomic anxieties." 678 F.2d at 229 (Pet. App. 15a). Ironically, PANE's *amicus*, the American Sociological Association ("ASA"), joins us in rejecting the distinction that Judge Wright attempted to draw. ASA Brief at 3 n.1. In the end, PANE cannot escape the force of *Hanly* and the other cases holding that psychological stress is not cognizable under NEPA.

IV. The Difficulties Inherent In Predicting Stress Cannot Be Ignored In Deciding This Case

PANE makes much of the Public Utilities' discussion of the difficulties inherent in predicting stress, arguing that the measurability of stress is an issue for determination by the agency based on a factual record.[8] PANE Brief at 33-37. On several counts, PANE's argument misses the mark.

---

[8] It is one thing for PANE to argue that in deciding the legal question presented by this case, the Court must accept at face value PANE's allegations of psychological health effects. It is a wholly different proposition for PANE to make representations that independent studies have established the existence of "post-traumatic health impairments." PANE Brief at 5 n.14. Without seeking to propel the factual question of stress levels at TMI into this arena, the Public Utilities nevertheless must make it clear that they strongly disagree with PANE's claims about stress around TMI. None of the independent post-TMI-2 accident studies of stress has presented any evidence of distress of the seriousness of post-traumatic stress disorder, as that disorder is described in the Diagnostic and Statistical

The significance of the measurability problem or, more precisely, the prediction problem is that it represents another very practical reason for not interpreting NEPA to encompass the assessment of psychological stress. The Public Utilities previously described in detail the difficulties in quantification and proof of the completely individualistic and synergistic phenomenon of stress. *See* Public Utilities Brief at 34-38. These problems are enormously compounded by the need to predict future levels of stress in a community of people affected daily by myriad private and public events.[9]

Manual of Mental Disorders (3d ed. 1980) repeatedly referred to by PANE in its brief. *See* PANE Brief at 21 n.37, 30 n.53, 36 n.63. This fact is even acknowledged by PANE's consultant, Robert Holt, who has observed that the evidence adduced by the TMI surveys represents "an increase in mild demoralization, not the precipitation of diagnosable standard mental disorders." R. Holt, A Selective Review of Research on Health Effects of the Accident at Three Mile Island (forwarded to the Commission staff by PANE's counsel on May 12, 1982) at 24-25.

[9] PANE apparently does not dispute this fact, for it acknowledges that "the examination of psychological health matters is not simple, and even knowledgeable experts have limited ability to make reliable predictions." PANE Brief at 43. PANE contends, however, that "this is precisely the kind of case in which it is well within the competence of the scientific community to make a reasonable prediction of the reactions of a population to an impending event." PANE Brief at 36 n.63. In support of this claim, PANE cites two papers by its own consultants, neither of which explains in any way how to go about making such predictions. PANE also ignores the position taken by the group of experts who participated in a workshop convened by the NRC and attended by PANE's counsel on the psychological stress impact of restarting TMI-1. In the experts' view, it was possible that "the uncertainty of the predictions could be so high that [the experts] would not be willing to make them at all." NUREG/CP-0026, Proceedings of the Workshop on Psychological Stress Associated with the Proposed Restart of Three Mile Island, Unit 1 at xiv (April 1982) (hereinafter "Workshop Proceedings").

PANE's *amicus*, the APA, devotes a significant portion of its brief to the issue of measurability. APA Brief at 6-19. Notably, however, almost all of this discussion, including the numerous cited authorities, applies only to the measurement of past or present levels of stress, and not to the prediction of future stress. *See, e.g.*, APA Brief at 10-17 (discussion of four basic approaches to the measurement of psychological health effects of stressful events). Scant attention is paid to the issue of prediction. In fact, the APA cites only two authorities, authored in whole or in part by one of PANE's consultants, Robert Holt, to support their view that a "goal" of psychology is to predict future behavior. APA Brief at 18-19. PANE also relies upon the sort of scientific evaluations that are described by the APA, and to that extent, PANE also pays short shrift to the perhaps impossible task of predicting stress. PANE Brief at 36 n.63. *See* n.9, *supra*.

Furthermore, NEPA's requirement that the agency describe the anticipated environmental effects of proposed action must be subject to a "rule of reason." *Scientists' Institute for Public Information, Inc. v. AEC*, 481 F.2d 1079, 1092 (D.C. Cir. 1973). The predictions PANE would require by their very nature extend that rule far beyond its previously applied limits. Such an extension is not only a congressional prerogative, *see* 678 F.2d at 239, 253 (Pet. App. 38a, 68a) (Wilkey, J., dissenting), but is also a relevant consideration in determining whether Congress intended NEPA to apply to future stress reactions of residents living near proposed major federal actions. In *Maryland-National Capital Park & Planning Comm'n v. United States Postal Service*, 487 F.2d 1029 (D.C. Cir. 1973), Judge Leventhal addressed this very issue in rejecting the applicability of NEPA to esthetic impacts, which, "[l]ike psychological factors . . . 'are not readily translatable into concrete measuring rods.' " *Id.*

1038, *quoting Hanly II, supra*, 471 F.2d at 833 n.10. In the court's view, the difficulties in measuring psychological and esthetic phenomena

> have a bearing on the intention of Congress, and whether it contemplated, for example, a requirement of a detailed "environmental impact statement," and concomitant investigation, because of the possibility that each new Federal construction would be ugly to some, or even most, beholders, on such issues as: Is this proposed building beautiful? Or, what is the esthetic effect of placing the "controversial" Picasso statue in front of the Civic Center building in Chicago? These types of problems lead us to conclude that a "substantial inquiry" or "hard look" was not contemplated, as a matter of reasonable construction of NEPA, where the claim of NEPA application is focused on alleged esthetic impact and the matters at hand pertain essentially to issues of individual and potentially diverse tastes.

478 F.2d at 1038-39 (citation and footnote omitted). *See also* 678 F.2d at 254 (Pet. App. 69a) (Wilkey, J., dissenting) (Congress did not intend NEPA to constrain federal action on these "psychological and emotional bases").

In summary, the difficulties inherent in predicting stress provide another reason why the scope of NEPA ought not to be expanded to include this phenomenon. Certainly, these difficulties support our conclusion that Congress did not intend NEPA to apply to the psychological impacts alleged by PANE.

V. Affirmance Of The Lower Court's Decision Would Impose Substantial Burdens On The NRC

PANE attempts to minimize the burden and difficulty of compliance with the court of appeals' judgment. PANE argues that the NRC could prepare an assessment of psychological stress on the basis of "available information"; that the NRC could determine from the

assessment that no EIS is required; that PANE would be "strongly discouraged" from seeking judicial review of an EIS prepared by the NRC; that the EIS need not affect the NRC's restart decision; that, in the final analysis, the lower court's decision at most requires nothing more than preparation of an EIS; and that, in "considering this issue," the NRC was not required by the lower court "to use any particular procedures." PANE Brief at 40-41. PANE's efforts to soft-pedal the impact of the decision below are disingenuous and completely inconsistent with what PANE has been arguing before the Commission.

Contrary to its position here, PANE has insisted before the Commission that the evaluation of psychological stress could not go forward without further predictive studies, including clinical evaluations. PANE Response to Licensee's Motion with Respect to Psychological Health Issue, at 5 (filed with the Commission June 3, 1982) (hereinafter "PANE Response"). PANE's consultant, Robert Holt, has described in greater detail the kinds of predictive studies that he believes are necessary. *See* Workshop Proceedings at 86-89. Mr. Holt would conduct new surveys of the population within a 55-mile radius of TMI-1, with special samples of subgroups such as pregnant women, mothers, "unemployed breadwinners" and "poor minority group members." He would ask the population a long series of questions concerning their psychological symptoms, their beliefs in the safety of TMI-1, their "general level of alienation," their "trust and faith in basic institutions," their "social support network," their "feeling of competence vs. helplessness," and their "overall feeling about the desirability of restart." Mr. Holt would then make his predictions by the following method:

> The basic method of prediction would be, then, to follow this model: Suppose that in a certain sector of

> the population 15% of those who reported that TMI was "extremely dangerous" reported having headaches "often." The predictive study would ask a new sample of that same subpopulation, "How dangerous do you feel TMI would be to you if unit 1 is restarted—extremely dangerous . . . not dangerous at all?" For those who replied, "extremely dangerous," the prediction would be that 15% of them would develop frequent headaches.

Id. at 86-87. Thus, by PANE's own account, the studies necessary to predict stress would be a substantial and complicated undertaking.

Similarly misleading is PANE's suggestion that the NRC could prepare an environmental assessment finding that no EIS is necessary. PANE has already advised the Commission that, in PANE's view, any such course of action "would be arbitrary and capricious in the extreme." PANE Response at 4. It is a foregone conclusion that PANE would be back in the court of appeals in a matter of days if the NRC decided no EIS was necessary.

PANE also implies that the lower court's judgment requires only an EIS at most and that if the NRC prepared such a document, the controversy would be at an end. Yet before the Commission, PANE has asserted that it is entitled to an adjudicatory, trial-type hearing after a draft EIS has been issued, public comments have been obtained, and the EIS has been published in final form. PANE Response at 5-19.[10] Under NRC regulations, such a hearing entails use of discovery, opportunity for numerous procedural motions, hearing testimony and cross-examination, proposed findings of fact and conclusions of law, preparation of an initial decision by a Licensing Board, and review of that decision by an

---

[10] PANE also believes that such a hearing would be required even if the NRC decided that no EIS was necessary. PANE Response at 18.

Appeal Board and the Commission itself. *See* 10 C.F.R. Part 2 (1982). And we know from PANE's Preliminary Plan for Presentation of Evidence on Psychological Distress that it expects to present extensive testimony by expert witnesses and by "individuals concerning their own experiences." J.A. 26. PANE's ultimate objective, of course, is to keep TMI-1 shut down permanently.[11] If the hearing process results in anything less than a complete shut-down, it is likely that PANE will again seek the aid of the court of appeals in achieving its goal. Even if PANE is unsuccessful in obtaining a permanent shut-down, the NEPA process will have delayed restart for a period of many months or even years.

In short, PANE's position in this case, endorsed by the court of appeals, is well calculated to keep TMI-1 shut down and tied up in litigation for the indefinite future. That result can only be avoided through a prompt reversal by this Court.

---

[11] It is PANE's expressed belief that "preventing restart is the best means of mitigating" psychological stress. PANE Brief at 20 n.35. *See also* materials cited in Public Utilities Brief at 31 & n.30.

CONCLUSION

The Amended Judgment of the court of appeals should be reversed, and the case should be remanded with instructions to deny PANE's Petition For Review.

Respectfully submitted,

JAMES B. HAMLIN
Counsel of Record

GEORGE F. TROWBRIDGE
JOHN B. RHINELANDER
DEBORAH B. BAUSER
SHAW, PITTMAN, POTTS & TROWBRIDGE
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000
Attorneys for Petitioners
Metropolitan Edison Company, et al.

Of Counsel:
JAMES B. LIBERMAN
DEBEVOISE & LIBERMAN
26 Broadway
New York, NY 10004
(212) 248-6900

February 22, 1983

Office-Supreme Court, U.S.
FILED
FEB 22 1983
ALEXANDER L. STEVAS,
CLERK

Nos. 81-2389 and 82-358

In the Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, ET AL., PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA, PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

REPLY BRIEF FOR THE UNITED STATES AND THE UNITED STATES NUCLEAR REGULATORY COMMISSION

REX E. LEE
Solicitor General

PAUL M. BATOR
Deputy Solicitor General

Department of Justice
Washington, D.C. 20530
(202) 633-2217

HERBERT PLAINE
General Counsel
Nuclear Regulatory Commission
Washington, D.C. 20555

TABLE OF AUTHORITIES

Cases:	Page
Breckinridge v. *Rumsfeld*, 537 F.2d 864, cert. denied, 429 U.S. 1061	16, 17
Como-Falcon Community Coalition, Inc. v. *United States Department of Labor*, 609 F.2d 342, cert. denied, 446 U.S. 936	16, 17
Goodman Group, Inc. v. *Dishroom*, 679 F.2d 182	16, 17
Hanly v. *Kleindienst*, 471 F.2d 823, cert. denied, 412 U.S. 908	17, 18
Hanly v. *Mitchell*, 460 F.2d 640, cert. denied, 409 U.S. 990	17, 18
Image of Greater San Antonio v. *Brown*, 570 F.2d 517	16, 17
Jackson County v. *Jones*, 571 F.2d 1004	17
Kleppe v. *Sierra Club*, 427 U.S. 390	7
Metlakatla Indian Community v. *Adams*, 427 F. Supp. 871	17
Monarch Chemical Works, Inc. v. *Exon*, 466 F. Supp. 639	17
Strycker's Bay Neighborhood Council v. *Karlen*, 444 U.S. 223	19

Statute and regulations:	
National Environmental Policy Act of 1969, 42 U.S.C. 4331 *et seq.*	*passim*
Section 102(2)(C), 42 U.S.C. 4332(2)(C)	2, 10, 15, 20
Section 102(2)(C)(i), 42 U.S.C. 4332(2)(C)(i)	2, 15
40 C.F.R. Part 1508:	
Section 1508.8	3, 12, 13
Section 1508.8(b)	3
Section 1508.14	11, 13, 14, 15

In the Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399

METROPOLITAN EDISON COMPANY, ET AL., PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

No. 82-358

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA, PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

REPLY BRIEF FOR THE UNITED STATES AND THE UNITED STATES NUCLEAR REGULATORY COMMISSION

---

1. Because many of the arguments made in respondent's and amici's briefs are directed at positions we do not espouse, we take this opportunity briefly to reiterate what we believe to be the correct interpretation of the relevant provisions of NEPA.

a. Section 102(2)(C) of NEPA requires a "detailed statement" whenever the federal government undertakes "major Federal actions significantly affecting the quality of the human environment" (hereafter "environmentally significant action"). This is the so-called "trigger" provision; it defines when an EIS is required.

b. What is to be addressed in this "detailed statement"? Is it to take account of *all* the important effects of an "environmentally significant action"? That is what one might conclude if the statute stopped at this point. But the statute does not stop. It specifies that the detailed statement is to address "the *environmental* impact of the proposed action" (Section 102(2)(C)(i); emphasis added). Thus, even where the trigger provision brings the statute into play—that is, even where the government wishes to undertake "environmentally significant action"—it is only the *environmental* impact of that action that is singled out for special concern.

c. What is the human "environment"? What is an "environmental" impact? We believe these terms refer to the physical surroundings in which man lives. The primary focus is the land, the water, the air, the plant and animal life—in short, the *natural* environment. True, the ultimate concern of NEPA (as of many other statutes) is the welfare and health of mankind. But, in *this* statute, Congress was addressing action that might adversely affect people through a deterioration of the natural environment.

It is this focus that is emphasized by the statutory structure. A two-step analysis is required: Is the proposed action *environmentally* significant? If so, what its *environmental* impact?

2. Given this structure, it falsifies the statute to read it as requiring that, whenever the federal gov-

ernment proposes "environmentally significant action," the EIS must address all of the wide range of important social and economic effects—or even all of the important health effects—of that action. An intermediate question must be asked: is it the environmental impact of the proposed (environmentally significant) action that itself produces these nonenvironmental effects?

e. The "environmental" impact appraisal process becomes unmanageable and ineffective if this critical intermediate question is elided. Congress sought to cast an intense spotlight on the distinctly environmental consequences of federal action, consequences that had previously been insufficiently recognized and appreciated in federal decisionmaking. This purpose would be frustrated if that spotlight is broadened to encompass all of the important effects of every federal proposal that happens to constitute "environmentally significant action."

f. Our reading of the statute does not artificially exclude from consideration health (including mental health) effects of environmental interventions, just as it does not rigidly exclude consideration of economic and social consequences—so long as these are directly attributable to the distinctly environmental impact of these interventions. Our position is, therefore, consistent with the regulations of the Council on Environmental Quality stipulating that both direct and indirect environmental effects are to be considered in an EIS (40 C.F.R. 1508.8). When the distinctively environmental impact of federal action itself creates side effects on a broad range of human concerns ("aesthetic, historic, cultural, economic, social, or health") (40 C.F.R. 1508.8(b)), those second-order effects are within the scope of the EIS.

g. Respondent's and amici's fundamental line of argument is: (i) the restart of TMI-1 is "environmentally significant action"; (ii) one of its important effects will be a deterioration of the mental health of nearby residents; (iii) this adverse health effect must therefore be addressed in the EIS. This argument depends on one of two alternative propositions. The first simply ignores the two-step structure of the statute and requires that *all* of the side effects of "environmentally significant action" be automatically considered, whether or not these side-effects are themselves attributable to the environmental impact of the proposed action. It is our position that, for the reasons just given, this construction is precluded both by the plain language and by the central purposes of the statute.

h. In the alternative, it seems to be asserted that the adverse mental health consequences of restart would in fact be caused by the environmental impact of the proposed (environmentally significant) action. But respondent's formulations of this assertion obscure a critical feature of this case: here all of the adverse mental health effects would be a product of stress produced by fear of environmental impacts, not by those impacts themselves. Our submission, on the other hand, is that fear of operation of a nuclear power plant is not itself an environmental effect within the meaning of NEPA. True, the alleged fear is the fear of environmental consequences. But it is not produced by actual changes in the physical environment, but rather by subjective reactions to it. In short, for reasons to be elaborated, we believe that the creation of anxiety is not itself an environmental impact, and therefore does not qualify as a subject to be addressed in its own right in an EIS.

i. In contrast to respondent, we offer the Court a principled interpretation of the range of environmental impacts cognizable under NEPA that is consistent with the statute's fundamental purpose: the protection of the natural environment. It is through that protection that Congress sought in this statute to contribute to the health and welfare of mankind. Congress understood that man's health and welfare depend upon the continuing vitality of the natural environment and thus instructed federal agencies to consider carefully the effects of proposed federal action upon that natural environment. That is why NEPA requires examination only of those human health effects that are directly attributable to environmental causes.

2. We now turn to a more detailed examination of respondent's arguments.

a. Respondent seems to concede that its allegations of adverse effects upon mental health are within the scope of NEPA only if "there is an *environmental cause* for the health damage" (Br. 21; emphasis added). It argues that the requirement of environmental causation has been satisfied here because the renewed operation of TMI-1 and its mental health effects will occur in a "geographic area" or in "human surroundings" (Br. 25, 26, see also Br. 15-16 n.29). However, it is not easy to conceive of federal activity that does not take place in a "geographic area" or "human surroundings." Under respondent's construction of the terms "environment" and "environmental" the environmental causation requirement has effectively been read out of the statute, and all effects of federal "environmentally significant action" would be subject to NEPA evaluation.

b. Respondent also asserts that the requirement of environmental causation is satisfied because "restart

of TMI-1 * * * will cause the local environment to threaten human health" (Br. 15), that "psychological health damage * * * would result from the change that restart will cause in the human environment at Three Mile Island" (Br. 28), and that this case involves "federal action that would fundamentally change the physical reality of the surrounding environment" (Br. 29). But reference to the environment in each of these phrases is gratuitous and misleading. It is the knowledge of restart and associated fear, rather than actual changes in the physical environment, that will be the cause of any mental trauma that is occasioned by restart.

c. Respondent also argues (Br. 30-32) that the alleged mental distress is environmentally caused because it is caused by the "potential" for, or "possibility" of, a nuclear accident that would entail environmental consequences.[1] Respondent starts with the valid premise that NEPA requires a federal agency to consider not only immediate and certain environmental effects but also those that are reasonably possible. But as we explained in our opening brief (at pages 44-48), psychological harm that is attributable to anxiety caused by a "potential" for or "risk" of an impact on the natural environment cannot be regarded as caused by an environmental impact. Contrary to all conventional notions of causation, the alleged environmental effect (stress) would here occur in advance of its environmental cause (radiation released in a nuclear accident), and whether or not the "cause" itself ever occurs. The alleged stress would arise if residents of the TMI-1 area believed

---

[1] See, *e.g.*, Resp. Br. 30 ("potential for massive radiation exposure"); *id.* at 30-31 n.53 ("prospect of a future accident"); *id.* at 31 ("result of the potential for * * * serious radiation exposure").

the plant to be operating, even if it is not. Conversely, the alleged stress would not, on respondent's theory, arise if operation of the plant were conducted in secret. The point of these fanciful illustrations is simply that the alleged health effect of restart is attributable to the anxieties of PANE members, rather than to actual changes in the physical environment.[2]

3. It is not a matter of indifference whether fears of an environmental impact are regarded as environmental impacts that must be assessed in their own right under NEPA. The purpose of NEPA was to assure that threats to man's life support system—a distinct class of threats—were no longer overlooked or undervalued in federal decisionmaking. NEPA has thus been interpreted to require that federal decisionmakers take a "hard look" at the environmental consequences of environmentally significant federal action. *Kleppe* v. *Sierra Club*, 427 U.S. 390, 410 n.21 (1976). Classification of individuals' fears about possible environmental impacts as themselves constituting environmental impacts, requiring formal analysis in their own right, would confuse and dilute the "hard look" principle and inject an uncertain and artificial component into every environmental assessment.

a. We need not quarrel with the assertion of amici that methods exist for the study and assessment of

---

[2] Only in a footnote (Br. 31 n.55) does respondent address our central contention that the alleged mental distress and environmental impacts merely stem from a common source—the fact of restart—and that the latter do not cause the former. Respondent claims that the mental stress "flows from the restart source *because* the potential for physical damage also flows from that source" (*ibid.*; emphasis in original). This formulation again ignores the intermediate question mandated by the statute. And it again obscures the fact that what causes the mental stress is fear of environmental harm, not actual environmental harm.

stress. But here we are talking about predicted stress, to be created by apprehension of future events whose physical attributes are themselves not wholly certain. Multiple layers of uncertainty are built into such an inquiry. Further, the question whether the study has been carried out by proper methodologies, and whether the stress has been accurately and objectively predicted, will inevitably arouse controversy—and, not coincidentally, will inevitably become a fertile breeder of complex and time consuming litigation. At the very least, then, it is a most serious question whether sensitivity to the environmental consequences of federal action will be increased by the injection of this volatile and tangential issue into the environmental assessment process.

b. Stress caused by fears of environmental consequences is not merely an additional consequence comparable to others to be assessed in the NEPA process. It is an independent and cross-cutting variable, responsive to many factors that have nothing to do with improving or degrading the environment. For instance, fear of nuclear radiation and accidents is intense, and may lead some to prefer resort to coal as a source of power without regard to the comparative environmental impacts of the two proposals. And if stress caused by fears of government action is denominated an environmental impact to be given independent formal weight, this creates an incentive for those opposed to that action to fan those fears, whether or not the opposition is environmentally motivated and whether or not the fears are rationally grounded.

c. It is not easy to see how studying and evaluating the intensity of public fear and suspicion surrounding the operation of a nuclear power plant will

contribute to the rational assessment of the safety of that plant. As Commissioner Hendrie explained (Pet. App. 89a):

> If anxieties are rationally based, the corrective measures which would alleviate the stress would presumably be justifiable in terms of protecting physical health and safety—irrespective of their effect on psychological stress.

On the other hand, to the extent that anxieties about environmental hazards are not warranted by the actual environmental hazards, attempts to measure those anxieties will either be an empty exercise or will tend to distort the process of reasoned and responsible decisionmaking in this controversial field.

d. That fear of an environmental impact is very different from a true environmental impact is revealed by the various proposals for mitigation measures. Respondent frankly concedes (Br. 20 n.35) that its goal is to keep the TMI-1 plant shut permanently. Of course this solution does not identify any distinctively environmental effects of plant operation; it therefore symptomizes the fact that respondent's fears cannot be specifically traced to any such effects. The alternative mitigation measures suggested by respondent—"a very cautious and gradual increase to full power or a limitation on the force of the chain reaction, perhaps coupled with other measures" (*ibid.*) —are equally revealing. To the extent that these measures may actually be required or desirable for attainment of public health and safety from radiation or accident, they are of course within the scope of NEPA in any event. However, insofar as these measures are not warranted under NEPA (or the Atomic Energy Act) in order to guarantee public health and

safety, they are clearly exposed as nonenvironmental solutions for nonenvironmental problems.[3]

4. Several points raised by amicus curiae American Sociological Association merit attention.

a. The ASA's argument is almost entirely directed at a succession of straw men. Contrary to ASA's suggestion (Br. 12-13), we have not overlooked the fact that Section 102(2)(C) of NEPA requires two separate decisions by a federal agency: *first*, whether a contemplated federal action entails environmental effects that are sufficiently significant to require preparation of an EIS (the "trigger" decision), and *second*, the determination of the environmental impacts of that action (the "scope" decision). See Gov't Br. 23-24. Indeed, the centerpiece of our argument is that even when the obligation to prepare an EIS has been "triggered" by environmental consequences of the federal action, the scope of the resulting EIS is limited to those effects of federal action that are environmental (or environmentally caused).

---

[3] More striking still are the prescriptions proposed by amicus curiae American Psychological Association (Br. 27-29). APA proposes, first that stress may be alleviated through "appropriate presentation of relevant information"—presumably about actual plant operation and environmental effects. This, of course, is not itself an environmental prescription. In any event, it is a program the Commission has pursued and will pursue whether or not it has an obligation to measure population stress. See Pet. App. 83a (opinion of Commissioner Hendrie). On the other hand, APA's second suggestion, that the Commission arrange for group therapy programs to assist plant neighbors to manage the stress resulting from their fears, plainly reveals that the distress involved is not caused by any effect upon the natural or physical environment, as opposed to the perceptions of individuals. Whatever the therapeutic benefits of this proposal might be, it cannot be regarded as an environmental mitigation strategy.

Nor, contrary to ASA's reconstruction of our argument (ASA Br. 15), do we argue that the range of effects of federal action that are considered environmental for purposes of the trigger determination (that is, whether action "significantly affect[s] the quality of the human environment") is in any respect broader than those cognizable as "environmental impact[s]" for purposes of the scope decision. Indeed, our argument is that under the statute the environmental nature of the effects of federal action is the determinative criterion at both decision points. Furthermore, we assign no dual meaning to the terms "environment" and "environmental." Rather, in *both* the trigger and scope decisions the attention of the federal decisionmaker is directed to the effects of federal action upon the natural and physical environment; nonenvironmental side effects come in only if they are the product of these environmental effects. See Gov't Br. 30-37.[4]

We also take issue with ASA's characterization (Br. 13-14) of the issue in this case as a "trigger" as opposed to a "scope" issue. In fact the issue in this case cannot be assigned to either of these pigeonholes. The question before the Commission was whether stress caused by fear of restart of TMI-1

[4] Thus, contrary to ASA's assumption, in the hypothetical scenario it propounds (Br. 17-19) population movements that are not attributable to the distinctively environmental effects of the project (such as depletion of a scarce water supply) would not be independently cognizable in connection with either the scope or trigger determination.

It should further be noted that under CEQ regulations (40 C.F.R. 1508.14 (see pages 12-14, *infra*)), the validity of which is in no way in issue here, consideration of socio-economic effects is in any event not required unless and until it has been determined that an EIS is necessary.

should be considered in connection with the proposed decision to approve restart. Without distinguishing between the trigger and scope decisions—there was no reason for it to do so—the Commission simply answered that generic question in the negative. The Commission's decision meant that psychological distress could not serve to trigger the obligation to prepare or supplement an environmental impact statement. It also meant that if an EIS were determined to be required, psychological distress occasioned by fear of federal action would lie outside the scope of environmental assessment.[5]

b. ASA mischaracterizes the import of the pertinent provisions of the Council on Environmental Quality's NEPA regulations. ASA acknowledges (Br. 21) that the separate definitions of "effects" and "impacts" (regarded as synonymous) (40 C.F.R. 1508.8)

---

[5] This "generic" decision by the Commission was rendered in 1980. It was thereafter that the Atomic Safety and Licensing Board turned to the trigger issue and determined in December 1981 that a full-scale supplemental EIS was not necessary, relying upon an environmental impact appraisal that addressed the effects of restart upon the natural environment and the impact of those effects upon man, but which excluded the alleged stress effects of restart. See Gov't Br. 9-10 n.6, 18-19 n.13; compare ASA Br. 14.

ASA takes issue (Br. 14-15) with the court of appeals' characterization of the issue before it in terms of the need for supplementation of the previously prepared EIS. ASA appears to suggest that the court should have framed its inquiry in terms of whether the restart decision itself was major federal action significantly affecting the quality of the human environment. In this ASA merely echoes our observation (Gov't Br. 22-23 n.14; 82-358 Pet. 17 n.12) that the court of appeals improperly viewed the Commission's oversight of its licensees as creating a perpetually ongoing major federal action subject to NEPA without regard to whether further federal action is actually contemplated.

and "human environment" (40 C.F.R. 1508.14) must be read together to determine whether a particular effect of contemplated federal action is to be regarded as an environmental effect for purposes of the trigger and scope decision. Thus, ASA concedes that the broad range of consequences defined as "effects" of federal action by the regulations (40 C.F.R. 1508.8) are cognizable under NEPA only "if 'on the human environment' " (Br. 21).

ASA further concedes (Br. 22) that under the Council's regulations, effects upon the human environment include only those upon the natural and physical environment and "the relationship of people with [the physical] environment." 40 C.F.R. 1508.14. Thus far ASA's argument is entirely in conformity with our own. But ASA then suggests that the relationship of people to the physical environment in fact encompasses all the nonenvironmental "effects which federal actions may produce—namely, 'ecological * * * aesthetic, historic, cultural, economic, social, [and] health' " (Br. 22, quoting 40 C.F.R. 1508.8, CEQ's definition of "effects"). This circular reasoning would read the regulations as discarding the statutory directive that an EIS be confined to the *environmental* impacts of federal action. Indeed, as ASA's brief candidly avows (Br. 22), on this reading the threshold requirement of a significant effect "on the human *environment*" loses all significance.[6]

---

[6] Under the CEQ regulations, therefore, any proposed federal action which will affect the lives of people in one of these ways [*i.e.*, causing ecological, aesthetic, historic, cultural, economic, social, or health effects] qualifies as an action "affecting the quality of the human environment" under Section 102(2)(C), and the Section 1508.8 "effects" that it will produce constitute environmental

There is no warrant for assigning such a fantastic meaning to the CEQ regulations. ASA's argument takes no account of CEQ's admonition that its definition of the human environment as "the natural and physical environment and the relationship of people" thereto "*means* that economic or social effects are not intended by themselves to require preparation of an environmental impact statement." 40 C.F.R. 1508.14 (emphasis added). ASA's explanation (Br. 24) that this provision was merely intended to exclude "certain non-physical impacts of a proposed federal action when they were not accompanied by any physical environmental impacts" simply does not explain why the quoted definition "means" that social or economic effects cannot by themselves trigger preparation of an EIS. In our view the answer is plain: when such effects are not attributable to environmental causes (*i.e.*, they stand "by themselves") they cannot be regarded as environmental effects. Conversely, when social or economic effects have an environmental cause, expressed in the natural or physical environment, they are within the scope of any required EIS.[7]

---

impacts for purposes of the "trigger" and "scope" decisions.

ASA Br. 22.

It should be noted that, so interpreted, the Council's regulations are wholly inconsistent with the interpretation of NEPA adopted in decisions of the courts of appeals which (as ASA concedes, Br. 27 n.27) the regulations were intended to codify. See pages 15-16 & n.9, *infra*.

[7] The Council's definition of human environment continues (40 C.F.R. 1508.14; emphasis added):

> When an environmental impact statement is prepared and economic and social and natural or physical *environmental* effects are *interrelated*, then the environmental

5. Respondent (Br. 27-29) and amicus curiae ASA (Br. 24-29) seek support for their interpretations of NEPA in the decisions of the lower courts. As explained in our opening brief (at pages 38-40), the courts of appeals have generally recognized that although "NEPA goes beyond * * * the 'physical environment' * * * factors other than the physical environment [are cognizable] * * * only when there ex-

---

impact statement will discuss all of these effects *on the human environment.*

The Council thus made clear that effects of federal action not expressed upon the natural or physical environment are not within the scope of NEPA unless traceable to physical environmental effects. ASA attempts to gainsay the CEQ's stipulation that social and economic effects are cognizable under NEPA only if *"interrelated"* with effects upon the natural and physical environment, suggesting that this requirement is satisfied whenever social and economic effects stem from the same source as environmental effects. But this is to rob the requirement of interrelatedness of all meaning, for whenever a federal action has environmental and non-environmental consequences—as nearly every federal action of environmental significance does—the resulting EIS would be required, contrary to Section 102(2)(C)(i) of NEPA, to address all impacts, both environmental and non-environmental. The natural reading of 40 C.F.R. 1508.14 is that stated in our opening brief (at pages 35-38): it embodies and implements the requirement of environmental causation that defines the requirements of Section 102(2)(C). (The regulation also specifies, of course, that social and economic effects are relevant only if it has been determined on other grounds that an EIS is necessary.)

The letter of John Shea, a staff attorney at CEQ, dated February 14, 1980, reproduced as Appendix C to respondent's brief, is of course not an authoritative statement by the Council. In any event, it constitutes an ambiguous answer to an ambiguous question about the cleanup of TMI-2 (*not* the restart of TMI-1), and does not focus upon the relevance of stress caused by fears of government actions.

ist[s] a primary impact on the physical environment." *Breckinridge* v. *Rumsfield*, 537 F.2d 864, 865-866 (6th Cir. 1976), cert. denied, 429 U.S. 1061 (1977).[8] Respondent acknowledges these decisions (Br. 29), but is content to suggest that "[n]one of these cases presents a fact situation at all similar to that now before the Court," without explaining why the principle of these decisions is not controlling.

Respondent also observes that these cases recognize that the scope of NEPA extends beyond the direct impact of federal action upon the natural environment. With that proposition we have no quarrel, for our interpretation of NEPA encompasses the effects upon man of federal action—as long as those effects are propagated through the physical environment. Amicus curiae ASA suggests (Br. 26-28 & nn.26 & 27), however, that these decisions reflect only a threshold requirement that federal action have *some* environmentally significant effect, as a predicate for requiring that *all effects* arising from the particular action be addressed in an EIS. We disagree. Although it was held in each of the cited cases that no EIS was required because *no* impact on the natural environment was claimed, the rationale adopted by each of the courts of appeals was simply that social, economic and cultural effects of the character involved were not environmental effects.[9]

---

[8] Accord: *Image of Greater San Antonio* v. *Brown*, 570 F.2d 517, 522 (5th Cir. 1978); *Como-Falcon Community Coalition, Inc.* v. *United States Department of Labor*, 609 F.2d 342, 345-346 (8th Cir. 1979), cert. denied, 446 U.S. 936 (1980); *Goodman Group, Inc.* v. *Dishroom*, 679 F.2d 182, 185-186 (9th Cir. 1982).

[9] See *Breckinridge* v. *Rumsfeld*, *supra*, 537 F.2d at 865-867; *Image of Greater San Antonio* v. *Brown*, *supra*, 570 F.2d at

Respondent (Br. 27-28) and amicus ASA (Br. 28) rely, finally, upon the Second Circuit's decisions in *Hanly* v. *Mitchell* (*Hanly I*), 460 F.2d 640, cert. denied, 409 U.S. 990 (1972); and *Hanly* v. *Kleindienst* (*Hanly II*), 471 F.2d 823 (1972), cert. denied, 412 U.S. 908 (1973). It is true that the Second Circuit stated in *Hanly I* that the reach of NEPA (460 F.2d at 647; citations omitted):

> extends beyond sewage and garbage and even beyond water and air pollution. The Act must be construed to include protection of the quality of life for city residents. Noise, traffic, overburdened mass transportation systems, crime, congestion and even availability of drugs all affect the urban "environment" * * *.

As previously explained, we have no quarrel with the proposition that side effects propagated by environ-

---

522; *Como-Falcon Community Coalition, Inc.* v. *United States Department of Labor*, *supra*, 609 F.2d at 345-346; *Goodman Group, Inc.* v. *Dishroom*, *supra*, 679 F.2d at 185-186.

Significantly, each of the decisions refers to the statutory requirement of a "primary" impact on the physical environment; those social or economic effects said to be cognizable in the presence of such a primary impact are repeatedly characterized as "secondary"—*i.e.*, caused by a primary impact on the natural environment. *Breckinridge* v. *Rumsfeld*, *supra*, 537 F.2d at 866; *Image of Greater San Antonio* v. *Brown*, *supra*, 570 F.2d at 522; *Como-Falcon Community Coalition, Inc.* v. *United States Department of Labor*, *supra*, 609 F.2d at 345; *Goodman Group, Inc.* v. *Dishroom*, *supra*, 679 F.2d at 185.

Contrary authorities cited by ASA (Br. 28) generally are not in point. Thus, *Jackson County* v. *Jones*, 571 F.2d 1004, 1007 (8th Cir. 1978); *Monarch Chemical Works, Inc.* v. *Exon*, 466 F. Supp. 639, 655 (D. Neb. 1979); and *Metlakatla Indian Community* v. *Adams*, 427 F. Supp. 871, 875 (D.D.C. 1977), simply do not address the question whether non-environmentally-caused socio-economic effects of environmentally significant actions are cognizable under NEPA.

mental impacts may be cognizable under NEPA. We disagree, however, with the suggestion that the Act be extended directly to protect the "quality of life for city residents" generally. For city residents, as for residents of suburban or rural areas, NEPA requires only the consideration of consequences attributable to adverse *environmental* change. In any event, the broad rationale announced by the Second Circuit swept considerably beyond its actual holding, for noise is surely a physically environmental impact (as may be congestion of people, automobiles, and mass transit facilities, to the extent attributable to the decisions of federal agencies about the siting of facilities).[10]

6. Respondent argues finally (Br. 37-44) that the decision of the court of appeals imposes no undue burden on federal agencies. To the extent that contention is relevant at all, it is incorrect. Respondent suggests first that because EISs need only be prepared respecting major federal actions significantly affecting the human environment, the duty to assess

---

[10] The suggestion in *Hanly I* that the influx of illegal drugs into a neighborhood is an "environmental" impact seems to us incorrect, at least in the absence of a showing that the influx was caused directly by changes in the physical environment. In any event, stress caused by fear of such an influx does not count as an environmental impact.

Hanly I and *II* were decided shortly after the enactment of NEPA. Since that time the courts of appeals have uniformly agreed that purely socioeconomic impacts of federal action are not cognizable under NEPA, and the Council on Environmental Quality has adopted regulations confirming that view. And *Hanly II* recognizes that the mental distress suffered by neighbors of a proposed prison in consequence of their distaste for prisons is *not* cognizable under NEPA. 471 F.2d at 833.

non-environmental effects would be limited. But as redefined by respondent, the environmental causation aspect of this test amounts to nothing more than a requirement that the federal action have some particular geographic scope (see page 5, *supra*). Moreover, if, as amicus curiae ASA contends, any proposed federal action that has aesthetic, historic, cultural, economic, social, or health effects, must be deemed environmental, limitations on the scope of the NEPA obligations disappear entirely. In any event, even if federal agencies were required "only" to assess the non-environmental effects of all environmentally significant actions, the resulting burden would plainly be substantial—and unrelated to any objective Congress intended to effectuate.

Nor is it relevant that, as respondent observes (Br. 40-41) the obligations of federal agencies under NEPA are fundamentally procedural. To be sure, it is established that once an agency has taken a hard look at environmental consequences of contemplated action its decision on the best course to pursue may not be set aside by a reviewing court. *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, 444 U.S. 223, 226-228 (1980). But it does not follow that the substantial expansion of the procedural obligations of federal decisionmakers is to be regarded as a matter of indifference. Moreover, because NEPA was intended to force federal administrators to pay greater attention to environmental values, any decision that requires that non-environmental values be afforded the same special consideration necessarily undermines the will of Congress. If, as respondent and the amici suggest, mental health effects caused by fears aroused by federal action are insufficiently attended to, petition must be made to Congress to redress the perceived

imbalance. That objective, which is entirely foreign to the National Environmental Policy Act, cannot be accomplished through Section 102(2)(C) of the Act.

For the foregoing reasons and the reasons stated in our opening brief, the judgment of the court of appeals respecting the Nuclear Regulatory Commission's responsibilities under NEPA should be reversed.

Respectfully submitted.

REX E. LEE
Solicitor General

PAUL M. BATOR
Deputy Solicitor General

HERZEL PLAINE
General Counsel
Nuclear Regulatory Commission

FEBRUARY 1983

★ U. S. GOVERNMENT PRINTING OFFICE: 1983 388808 1288

Office - Supreme Court, U.S.
FILED
JAN 29 1983
ALEXANDER L. STEVAS,
CLERK

Nos. 81-2269 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, *et al.*,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF FOR *AMICUS CURIAE* AMERICAN SOCIOLOGICAL ASSOCIATION IN SUPPORT OF RESPONDENTS

BRUCE J. TERRIS
PHILIP G. SUNDERLAND
TERRIS & SUNDERLAND
1526 18th St., N.W.
Washington, D.C. 20036
(202) 332-1882
Attorneys for the American Sociological Association

January 29, 1983

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

QUESTION PRESENTED

Whether Section 102(2)(C) of the National Environmental Policy Act required the Nuclear Regulatory Commission, when deciding whether to prepare an environmental impact statement on the restart of Three Mile Island—Unit 1, to consider the psychological effects of the restart upon persons residing near the facility.

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	v
INTEREST OF AMERICAN SOCIOLOGICAL ASSOCIATION	1
SUMMARY OF ARGUMENT	2
ARGUMENT	3
I. SOCIOLOGY AND THE OTHER SOCIAL SCIENCES ARE CAPABLE OF PREDICTING THE SOCIAL IMPACTS OF PROPOSED FEDERAL ACTIONS	3
A. Social Impacts Are a Real Consequence of Both Public and Private Actions	4
B. The Social Impacts of Major Federal Actions Are Capable of Being Predicted and Presented in the NEPA Process	6
1. NEPA Does Not Require a Precise Measurement or Quantification of Impacts	6
2. Sociology and the Other Social Sciences Are Fully Capable of Presenting the Description of Social Impacts That NEPA Requires	7
II. THE NRC INTERPRETATION OF THE TERM "ENVIRONMENTAL IMPACT" IN SECTION 102(2)(C), WHICH EXCLUDES ALL NON-PHYSICAL IMPACTS OF A MAJOR FEDERAL ACTION FROM THE ENTIRE NEPA DECISION PROCESS UNLESS PROXIMATELY CAUSED BY A PHYSICAL IMPACT OF THE ACTION, SHOULD NOT BE ADOPTED BY THE COURT	12
A. The NRC Interpretation of Section 102(2)(C) Is Not Supported By NEPA	17

TABLE OF CONTENTS—Continued

Page

B. The NRC Interpretation of Section 102(2)(C) Is Not Supported By the CEQ Regulations 21

C. The NRC Interpretation of Section 102(2)(C) Is Not Supported By Decisions of the Federal Courts 24

D. The NRC Interpretation of Section 102(2)(C) Is Not Supported By Agency Practice Under NEPA 29

CONCLUSION 30

TABLE OF AUTHORITIES

CASES: Page

Andrus v. Sierra Club, 442 U.S. 347 (1979) 21
Branzburg v. Hayes, 408 U.S. 665 (1972) 9
Breckinridge v. Rumsfeld, 537 F.2d 864 (C.A. 6, 1976), certiorari denied, 429 U.S. 1061 (1977) .. 27, 28
Brown v. Board of Education of Topeka, 347 U.S. 383 (1954) 9
City of New York v. United States, 337 F. Supp. 150 (E.D.N.Y. 1972) 7
Como-Falcon Community Coalition, Inc. v. United States Department of Labor, 609 F.2d 342 (C.A. 8, 1979), certiorari denied, 446 U.S. 936 (1980) .. 27
Concerned About Trident v. Rumsfeld, 555 F.2d 817 (C.A.D.C. 1977) 26
First National Bank of Chicago v. Richardson, 484 F.2d 1369 (C.A. 7, 1973) 26, 27
Goodman Group, Inc. v. Dishroom, 679 F.2d 182 (C.A. 9, 1982) 27, 28
Hanly v. Kleindienst, 471 F.2d 823 (C.A. 2, 1972), certiorari denied, 412 U.S. 908 (1973) ..... *passim*
Image of Greater San Antonio, Texas v. Brown, 570 F.2d 517 (C.A. 5, 1978) 27, 28
In re Gault, 387 U.S. 1 (1966) 9
Jackson City, Missouri v. Jones, 571 F.2d 1004 (C.A. 8, 1978) 28
Kleppe v. Sierra Club, 427 U.S. 390 (1976) 29
Maryland-National Capital Park and Planning Comm'n v. U.S. Postal Service, 487 F.2d 1029 (C.A.D.C. 1973) 26, 27
Metlakatla Indian Community v. Adams, 427 F. Supp. 871 (D.D.C. 1977) 28
Monarch Chemical Works, Inc. v. Exxon, 466 F. Supp. 639 (D. Neb. 1979) 28
Nucleus of Chicago Homeowners Ass'n v. Lynn, 524 F.2d 225 (C.A. 7, 1976), certiorari denied, 424 U.S. 967 (1976) 26, 27
Trout Unlimited v. Morton, 509 F.2d 1276 (C.A. 9, 1974) 26
Witherspoon v. Illinois, 391 U.S. 510 (1967) 9

TABLE OF AUTHORITIES—Continued

STATUTES: Page

National Environmental Policy Act, 42 U.S.C. 4332, *et seq.*

Section 102(2)(A), 42 U.S.C. 4332(2)(A) ..7, 11, 20
Section 102(2)(B), 42 U.S.C. 4332(2)(B) 6, 7
Section 102(2)(C), 42 U.S.C. 4332(2)(C) ....*passim*
Section 102(2)(C)(i), 42 U.S.C. 4332(2)(C)(i) .....*passim*
Section 102(2)(C)(ii), 42 U.S.C. 4332(2)(C)(ii) 12
Section 102(2)(C)(iii), 42 U.S.C. 4332(2)(C)(iii) 12

REGULATIONS:

40 C.F.R. 1502.9(c) 14
40 C.F.R. 1502.16(a) 21
40 C.F.R. 1502.16(b) 21
40 C.F.R. 1502.16(d) 21
40 C.F.R. 1502.22 7
40 C.F.R. 1502.22(b) 7
40 C.F.R. 1502.3 21
40 C.F.R. 1508.8 .....21, 22, 29
40 C.F.R. 1508.8(a) 21
40 C.F.R. 1508.8(b) 21
40 C.F.R. 1508.14 .....*passim*
40 C.F.R. 1508.27 23
43 Fed. Reg. 55978 ..... 22, 24

MISCELLANEOUS:

Adams, Smelser and Trieman, ed., *Behavioral and Social Science Research: A National Resource* (Washington D.C.: National Academy Press, 1982) 10, 11
Anderson, *The Federal Bulldozer* (Cambridge, Mass.: MIT Press, 1964) 5
Clark, "Effect of Prejudice and Discrimination on Personality Development" (Midcentury White House Conference on Children and Youth, 1950) 9

TABLE OF AUTHORITIES—Continued

Page

Cottrell, "Death by Dieselization," in *American Sociological Review* (June 1951) 6
Dear and Taylor, *Not on Our Street* (New York: Methuen Press, 1982) 11
DeFluer, D'Antonio and DeFluer, *Sociology: Human Society* (Glenview, Ill.: Scott, Foreman and Co., 1981) 8
Field, "Social Testing for United States Housing Policy: The Experimental Housing Allowance Program" (1980) 10
Frazier, *The Negro in the United States* (1949) 9
Gans, *The Urban Villagers* (Glenco, Ill.: 1962) 5
Hauley and Zimmer, *The Metropolitan Community: It's People and Government* (Beverly Hills, Calif.: 1970) 5
Helco and Rein, "Social Science and Negative Income Taxation" (1980) 10
Kerlinger and Pedhazur, *Multiple Regression in Behavioral Research* (New York: Holt, Rinehart and Winston, 1973) 8
McCall and Simons, eds., *Issues in Participant Observations* (Reading, Mass.: Addison-Wesley Publishing Co., 1969) 8
Myrdal, *An American Dilemma: The Negro Problem and Modern Democracy* (New York: Harper and Brothers, 1944) 9
Orr, "The Health Insurance Study: Experimentation and Health Financing Policy" (1980) 10
Palen, *The Urban World* (New York: McGraw-Hill Book Company, 1981) 5
Rainwater, *Beyond Ghetto Walls* (Chicago: Aldin Publishing Company, 1970) 5
Sheppard, Ferman and Faber, *Too Old to Work, Too Young to Retire: A Case Study of a Permanent Plant Shutdown* (Senate Special Committee on Unemployment Problems, E. McCarthy, Chair. 1959) 6
Sheppard, Aiken, Ferman, *Economic Failure, Alienation and Extremism* (Ann Arbor: University of Michigan Press, 1968) 5

TABLE OF AUTHORITIES—Continued

Page

Stauffer, *The American Soldier: Measurement and Prediction* (vol. 4) (Princeton: Princeton University Press, 1949) 9

Wolpert, *Long-Term Neighborhood Property Impacts of Group Homes for Mentally Retarded People* (Princeton University, November 1982) (unpublished) 11

BRIEF FOR *AMICUS CURIAE* AMERICAN SOCIOLOGICAL ASSOCIATION IN SUPPORT OF RESPONDENTS

In accordance with Rule 36.2, the American Sociological Association (ASA) has filed with the Court letters from counsel for the parties consenting to our appearance as an *amicus curiae* in these cases. We take no position in this brief on the Court's ultimate disposition of these cases. However, because one of our primary interests in the cases is to oppose the interpretation of the National Environmental Policy Act which the petitioner Nuclear Regulatory Commission has presented to the Court, we have characterized our brief as being in support of respondents.

INTEREST OF AMERICAN SOCIOLOGICAL ASSOCIATION

The American Sociological Association (ASA) is a nationwide organization of approximately 14,000 members who are committed to the research, teaching and application of sociology. The Association was formed in 1905 to stimulate and improve research, instruction and discussion among persons engaged in the scientific study of society.

ASA's interest in these cases is twofold. First, it is interested because of the suggestion in the dissenting opinion below that the non-physical impacts of a federal action which are of professional interest to sociologists and other social scientists—for instance, the action's effects upon existing social groups and community institutions—may not be sufficiently measurable or quantifiable by the social sciences to play a legitimate role in the decision process mandated by NEPA. In this regard, we wish to explain to the Court that the information on social impacts which the social sciences are able to present in the NEPA process is sufficiently measurable and quantifiable and, indeed, that it has been the practice of federal agencies to utilize such information in their imple-

mentation of NEPA since the statute was enacted in 1970.

Second, ASA is vitally interested in the extent to which environmental impact statements consider the social and other non-physicial impacts of major federal actions upon the human environment. We believe that the position urged upon the Court by the Nuclear Regulatory Commission (NRC) would, if adopted, considerably narrow the obligation of federal agencies to address these impacts in their environmental statements and would impose a severe and completely illogical limitation on the assessment of non-physical environmental effects in the NEPA process. We therefore wish to inform the Court of the reasons why we believe that it should reject the interpretation presented by the NRC.

SUMMARY OF ARGUMENT

1. The Court should reject the suggestion in the dissenting opinion below that the social impacts of federal actions may not be sufficiently measurable and quantifiable to be assessed in an environmental impact statement. NEPA does not require that social or any other type of environmental impacts be precisely measured or quantified in the environmental statement. On the contrary, the statute and the CEQ regulations acknowledge that environmental impacts generally cannot be measured or quantified and therefore only require that the best possible description of likely impacts be presented in the environmental statement. Sociology and the other social sciences are fully capable of presenting in the EIS process a reasonable description of the social impacts of federal actions. There exists a well-accepted and increasingly sophisticated methodology for studying and determining social impacts. Moreover, the results of this methodology have traditionally been utilized by a variety of forums, including the courts, the federal government when studying programmatic or policy changes, business and, indeed, the federal agencies in preparing environmental im-

pact statements. Thus, there is no basis for questioning the capability of the social sciences to present in the EIS process a description of social impacts which is of the quality which NEPA requires.

2. The NRC interpretation of Section 102(2)(C) of NEPA, which represents a striking departure from the manner in which the statute has been traditionally interpreted and applied, is plainly invalid. It is directly inconsistent with NEPA itself, the CEQ regulations, federal courts decisions and the EIS practice of the federal agencies. Contrary to the NRC position, none of these sources provides that the range of environmental impacts that agencies are to consider under Section 102(2)(C) when deciding whether an EIS is required is broader than the range of impacts that agencies are to assess in the EIS pursuant to Section 102(2)(C)(i). Moreover, contrary to the NRC position, none of these sources even suggests that the impacts of a federal action which are not directly upon the natural or physical environment are to be excluded from the NEPA decision process unless caused by or proximately traceable to an impact on the physical environment. In deciding these cases, therefore, the Court should reject the novel interpretation of NEPA which is urged by the NRC.

ARGUMENT

I. SOCIOLOGY AND THE OTHER SOCIAL SCIENCES ARE CAPABLE OF PREDICTING THE SOCIAL IMPACTS OF PROPOSED FEDERAL ACTIONS

ASA's participation in these cases stems in part from the suggestion in the dissenting opinion in the court of appeals that sociology and the other social sciences may be unable to provide information on the social impacts of a proposed federal action that is sufficiently meaningful for inclusion in the NEPA process.[1] This suggestion is

[1] Our participation is also prompted by a desire to ensure that the opinion of this Court avoids the incorrect references in the opinions below to what the court of appeals apparently considered to be well-

contained in the dissenting opinion's reference to the comment of the Court of Appeals for the Second Circuit in *Hanly v. Kleindienst*, 471 F.2d 823, 833 (C.A. 2, 1972), certiorari denied, 412 U.S. 908 (1973), that "[i]t is doubtful whether the psychological and *sociological* effects upon neighbors constitute the type of factors that may be considered in making [the] determination [whether to prepare an environmental impact statement] since they do not lend themselves to measurement" (emphasis added). 678 F.2d at 240-241 (Pet. App. 39a-40a). Although the dissenting opinion went on to discuss what it termed this "quantification problem" only with respect to the "psychological effects" alleged by respondents, its reference to the *Hanly* comment on "sociological effects" suggests that it also viewed the social impacts of federal actions to be a part of the "quantification problem." [2]

A. Social Impacts Are a Real Consequence of Both Public and Private Actions

Initially, we emphasize that any significant action in society, whether initiated by the public or private sector,

---

accepted and meaningful sociological concepts. For instance, both the majority and dissenting opinions refer to "sociologically based community anxieties" and "socioeconomic anxieties." 678 F.2d at 229, 241, 242 (Pet. App. 28a, 40a, 41a). Neither of these terms, however, represents a meaningful or accepted sociological concept. Sociology involves the scientific study of social organizations and social behavior. While sociologists study and predict the impacts of changed social conditions on existing community institutions, including impacts which might stem from any "anxiety" which a change in conditions may cause in community residents, it is incorrect to refer to such impacts or such anxiety as "sociological" or "sociologically based." Similarly, the lower court's reference to "socioeconomic anxieties" is incorrect. It is true of course that individuals may experience personal anxiety because of economic pressures or the influences exerted upon them by the social institutions in their lives. However, the term "socioeconomic anxiety" is not used by sociology to identify or reflect such anxiety.

[2] For a discussion of the reference in *Hanly v. Kleindienst* to "sociological effects," see p. 26, note 25 below.

may be accompanied by unintended but nonetheless very real impacts upon people, their social institutions and their social behavior. Moreover, these social impacts may occur completely independent of any effect which the action has on the physical environment. Thus, for instance, federal urban renewal efforts in the 1960s all too often led to a change in neighborhood property values, a permanent displacement of typically low-income populations, the elimination of established communities, a change in the racial and socioeconomic make-up of local school systems, and social isolation among those whom the revitalization efforts were intended to assist.[3] Federal subsidization of mortgages and the federally-financed highway program contributed to a number of significant social impacts in the 1950s and 1960s, most notably the migration of residents from the inner cities, the rise of "suburbia" and the corresponding decline in the nation's inner cities.[4]

Actions in the private sector have also been accompanied by unintended but real social impacts. For example, the closing in the 1950s of a Packard automobile factory in Detroit, Michigan, produced a serious sequence of social impacts, including mortgage failures and a generally depressed housing market, the failure of local businesses, increased demands on the city's public and private social services system, high political alienation among the displaced workers relative to the rest of the city's population, and even increased anxiety among the city's employed workers.[5] And, in one of the classic

---

[3] See, *e.g.*, Martin Anderson, *The Federal Bulldozer* (Cambridge, Mass.: MIT Press, 1964); Lee Rainwater, *Beyond Ghetto Walls* (Chicago: Aldin Publishing Company, 1970); Herbert Gans, *The Urban Villagers* (Glencoe, Ill.: 1962).

[4] See J. John [illegible]alen, *The Urban World* (New York: McGraw-Hill Book Co., 1981); Amos Hauley and Basil Zimmer, *The Metropolitan Community: It's People and Government* (Beverly Hills, Calif.: 1970).

[5] Michael Aiken, L. Ferman and H. Sheppard, *Economic Failure, Alienation and Extremism* (Ann Arbor: University of Michigan

pieces of social science literature documenting social impacts, the gradual disintegration of a small town in the southwest as a result of the regional railway system's decision to re-route its trains is reported.[6]

In short, it is beyond doubt that public and private actions, although well-intentioned and even when largely beneficial, are frequently accompanied by serious, adverse social impacts—for instance, upon property values, the stability, cohesion and make-up of neighborhoods, the structure of the family and other social institutions, the ability of government to meet the needs of its citizens and, indeed, the citizens themselves.

B. The Social Impacts of Major Federal Actions Are Capable of Being Predicted and Presented in the NEPA Process

1. *NEPA Does Not Require a Precise Measurement or Quantification of Impacts*

NEPA, we emphasize, does not demand precision in the presentation of the potential impacts (whether physical, social or other) of federal actions. Instead, in Section 102(2)(B), 42 U.S.C. 4332(2)(B), Congress made clear that the impacts of actions cannot be predicted in a highly precise or quantifiable manner by requiring all federal agencies to develop procedures to ensure that "presently unquantified environmental amenities and values may be given appropirate consideration in decision-making along with economic and technical considerations." Under this section, not only is precision not required of the federal agencies when predicting the impacts of proposed actions, but in addition even impacts which cannot be measured or quantified must be

---

Press, 1968); H. Sheppard, L. Ferman and S. Faber, *Too Old to Work, Too Young to Retire: A Case Study of a Permanent Plant Shutdown* (The Senate Special Committee on Unemployment Problems, 1959).

[6] W. Fred Cottrell, "Death by Dieselization," in *American Sociological Review* (June 1951), pp. 358-365.

given genuine consideration in the environmental impact statements.[7]

NEPA's requirement that unmeasureable or unquantifiable impacts be taken into account in the environmental impact statement is addressed in the CEQ regulation which discusses the issue of "incomplete or unavailable information." 40 C.F.R. 1502.22. In situations where information on an important environmental impact cannot be obtained, the regulation requires the agencies to assess the unknown impact by considering the "risk and severity of possible adverse impacts were the action to proceed in the face of uncertainty." 40 C.F.R. 1502.22(b). Thus, where an important impact of a proposed action cannot be unmeasured, let alone unquantified, the CEQ regulations require that it still be recognized and assessed in the environmental impact statement.

In essence, therefore, NEPA and the CEQ regulations require the agencies to develop and present in the environmental impact statement the best possible description of impacts, whether physical, social or other, which the proposed action may have on the human environment. Mathematical quantification and precise measurement of impacts are not mandated. All that is required is that the decisionmaker be alerted to and be given a reasonable description of the action's possible impacts so that they are taken into account in the agency decision process.

2. *Sociology and the Other Social Sciences are Fully Capable of Presenting the Description of Social Impacts that NEPA Requires*

The social sciences are fully capable of developing and presenting in the NEPA process the description of social

---

[7] The courts have held that Sections 102(2)(A) and 102(2)(B) of NEPA are applicable to the preparation of enviromental impact statements under Section 102(2)(C), 42 U.S.C. 4332(2)(C). See, *e.g.*, *Hanly v. Kleindienst*, *supra*, 471 F.2d at 834; *City of New York v. United States*, 337 F. Supp. 150, 158-159 (E.D.N.Y. 1972) (three-judge court).

impacts that the statute requires. The methodology for doing so exists today, is widely accepted and indeed has been developed to a high degree of sophistication.

The methodology for studying and predicting social impacts consists of a variety of information-gathering and information-analysis techniques. Information needed for social impact analysis and prediction is obtained through sample surveys,[8] in-depth interviews,[9] and field studies involving long-term observations and informal interviewing.[10] These data are then analyzed using one of a variety of statistical techniques that are available to the social sciences, ranging from a basic descriptive reporting of the data to quiet sophisticated multi-variate analyses.[11] The use of these techniques allows the researcher to determine the nature and strength of the correlation, if any, between the variables under study. Hypothesized patterns of social behavior are tested against the data. Where correlations are established, theories and models of social life are developed and patterns of change are documented. The social scientists can then credibly generalize these findings to make predictions about the same variables in other situations.

The validity of the methodology which is available to the social sciences for predicting social impacts and, more generally, the capability of the social sciences to predict social behavior are perhaps best shown by the policy-

---

[8] See, *e.g.*, Melvin L. DeFluer, William D'Antonio and Lois B. DeFluer, *Sociology: Human Society* (Glenview, Ill.: Scot, Foreman and Co., 1981), p. 43.

[9] See, *e.g.*, Melvin L.DeFluer, *et al.*, *Sociology: Human Society*, *supra*, p. 43.

[10] See, *e.g.*, George McCall and J. L. Simon, eds., *Issues in Participant Observations* (Reading, Mass.: Addison-Wesley Publishing Co., 1969).

[11] See, *e.g.*, F. Kerlinger and E. Pedhazur, *Multiple Regression in Behavioral Research* (New York: Holt, Rinehart and Winston, 1973).

and decision-making forums which have relied upon social science information and analyses over the years.[12]

The courts have utilized the findings and predictions of the social sciences. A notable example, of course, is this Court's decision in *Brown v. Board of Education of Topeka*, 347 U.S. 483, 494-95 and note 11 (1954), where, in concluding that separate educational facilities were inherently unequal, the Court relied upon the findings of social scientists regarding the impact of segregated schools upon the development of the black child.[13] The Court also relied upon the product of social science research in *In re Gault*, 387 U.S. 1, 20, note 26 (1966) (reports on juvenile delinquency and crime), *Branzburg v. Hayes*, 408 U.S. 665, 694, note 33 (1972) (survey on the effect of subpoenas on the disclosure of information to news media) and in *Witherspoon v. Illinois*, 391 U.S. 510, 520, note 16 (1967) (public opinion polls on capital punishment).

Social sciences have traditionally played an important role in the evaluation of public policy alternatives. For instance, in the fields of housing, welfare and health, when considering major changes in existing programs and policies, the federal government has frequently turned to the social sciences for a prediction of the consequences of these programmatic or policy changes. And the predictions and evaluations which the social sciences

---

[12] A classic example of the ability of social scientists to devise and apply in a concrete setting a system for predicting social behavior is presented by Samuel A. Stauffer in *The American Soldier: Measurement and Prediction* (vol. 4) (Princeton: Princeton University Press, 1949) which discusses the system developed by various social scientists at the conclusion of the second world war to process soldiers out of the armed services.

[13] *E.g.*, K. B. Clark, "Effect of Prejudice and Discrimination on Personality Development" (Midcentury White House Conference on Children and Youth, 1950); R. Frazier, *The Negro in the United States* (1949); Gunnar Myrdal, *An American Dilemma: The Negro Problem and Modern Democracy* (New York: Harper and Brothers, 1944).

have produced have contributed significantly to the federal decision process.[14]

The social scientists' primary information-gathering technique, the sample survey, has become a widely accepted means of predicting social behavior. Today, no major candidate for public office conducts a campaign without extensive polling of the electorate. In the commercial sector, the sample survey has become an indispensible tool for discovering consumer attitudes and preferences. And all levels of government utilize the sample survey to collect information on citizen attitudes for purposes of planning and policy making.[15] In each of these cases, a properly designed sample survey followed by appropriate statistical analysis allows future social behavior to be predicted with a high level of confidence.

Of particular importance to the NEPA process is the "locational analysis" specialty of the social sciences which has developed in the past few decades and which has been accepted in both public and private decision forums. Originating in the 1950s, locational analysis was initially designed to assist business operations in locating their production and distribution facilities. With the public's increased recognition in the 1960s of the negative social consequences of siting decisions (*e.g.*, noise, parking, congestion, displacement, land use, property values, and neighborhood stability), the "locational analysis" specialty developed a methodology for predicting

---

[14] See, *e.g.*, C. G. Field, "Social Testing for United States Housing Policy: The Experimental Housing Allowance Program," H. Helco and Rein, "Social Science and Negative Income Taxation," and L. L. Orr, "The Health Insurance Study: Experimentation and Health Financing Policy" in *Organisation for Economic Co-operation and Development, The Utilization of the Social Sciences in Policy Making in the United States: Case Studies* (Paris: Organisation for Economic Co-operation and Development, 1980), pp. 29-66, 235-282, 359-376.

[15] Robert McC. Adams, Neil Smelser, and Donald Trieman, ed., *Behavioral and Social Science Research: A National Resource* (Washington, D.C.: National Academy Press, 1982), pp. 64-66.

these consequences so they might be considered along with the more traditional cost-benefit factors in the siting decision process. This methodology has developed to the point where it is now possible to measure these unintended but nonetheless real social impacts of siting actions.[16] This has provided a means for both public and private decisionmakers to assess the true social costs of new projects and facilities.

Finally, the NEPA forum itself has traditionally relied upon the contributions of the social sciences and their predictions regarding the social impacts of federal actions. As we show below (see pp. 29-30), since the enactment of NEPA in 1970, the practice of federal agencies has been to assess in their environmental impact statements a wide range of the social impacts of proposed federal actions. This practice shows that for well over a decade the agencies have found the information-gathering and analysis skills of the social sciences to be fully capable of presenting a description of social impacts which complies with NEPA.

Moreover, this practice of the agencies to rely upon the social impact predictions of the social sciences has been fully consistent with the intent of Congress. Section 102(2)(A) of NEPA directs the federal agencies to utilize "a systemic, integrated use of the natural and *social sciences* and the environmental design arts" (emphasis added) when deciding actions which may affect the human environment. Congress could not, we submit, have shown more clearly that it desired the impacts of major federal actions which are subject to analysis by the social sciences to be assessed in environmental impact statements. Nor could it have stated more clearly that

---

[16] See, *e.g.*, Julian Wolpert, *Long-Term Neighborhod Property Impacts of Group Homes for Mentally Retarded People* (Princeton University, November 1982) (unpublished); N. J. Dear and J. M. Taylor, *Not on Our Street* (New York: Methuen Press, 1982). See generally Robert McC. Adams, *et al.*, *Behavioral and Social Science Research: A National Resource*, *supra*, pp. 81-83.

it considered the description of social impacts which sociology and the other social sciences are capable of providing to be sufficiently meaningful for inclusion in environmental statements.

II. THE NRC INTERPRETATION OF THE TERM "ENVIRONMENTAL IMPACT" IN SECTION 102(2)(C), WHICH EXCLUDES ALL NON-PHYSICAL IMPACTS OF A MAJOR FEDERAL ACTION FROM THE ENTIRE NEPA DECISION PROCESS UNLESS PROXIMATELY CAUSED BY A PHYSICAL IMPACT OF THE ACTION, SHOULD NOT BE ADOPTED BY THE COURT

Section 102(2)(C) of NEPA, 42 U.S.C. 4332(2)(C), requires the preparation of an environmental impact statement in conjunction with any proposal for a "major Federal action[ ] significantly affecting the quality of the human environment * * *." The environmental statement is to include, *inter alia*, an assessment of the "environmental impact of the proposed action" (Section 102(2)(C)(i)), including "any adverse environmental effects which cannot be avoided" if the action is taken (Section 102(2)(C)(ii)), and an assessment of the "alternatives to the proposed action" (Section 102(2)(C)(iii)).

These statutory provisions require two distinct EIS-related decisions by a federal agency which proposes an action which may require preparation of an environmental statement. The agency must first determine whether the action is of the kind requiring an EIS—*i.e.*, whether it is "major" and whether it will "significantly affect[ ] the quality of the human environment." If the agency concludes that the requirement for an EIS has been triggered, it must then determine the scope of its assessment obligations—*i.e.*, the nature and extent of the action's "environmental impact" which it must address in the environmental statement. We refer below to these decisions as the EIS "trigger" and "scope" decisions.

It is important that the status of the decision which the NRC made below—*i.e.*, whether it was a "trigger"

or a "scope" decision—be accurately characterized. This is because, as we show below, the Council on Environmental Quality and the courts have distinguished the NEPA obligations of federal agencies depending upon whether they are at the "trigger" or "scope" decision stage of the NEPA process.

The issue presented in these cases is whether the NRC, in deciding whether to prepare an environmental impact statement on the restart of Three Mile Island-Unit 1 (TMI-1), was required to consider the psychological effects [17] of the restart upon persons residing near the facility. This issue, whether to prepare an EIS, involves the EIS "trigger" decision.

The NRC, however, appears to believe that the question before it below involved the EIS "scope" decision for it analyzes the issue in these cases in terms of the "assessment obligation" which NEPA imposes upon federal agencies. NRC Br. 24. Further, it argues that its decision not to consider the psychological effects of the

---

[17] Respondents argued before the NRC and the court of appeals that the restart of TMI-1 would also have certain social and economic impacts on the communities surrounding Three Mile Island. See 678 F.2d at 230 (Pet. App. 29a). The court of appeals characterized these impacts as secondary environmental impacts which, under the CEQ regulations (see 40 C.F.R. 1508.14), may not by themselves require the preparation of an environmental statement and thus, if unaccompanied by a significant physical environmental impact, are to be excluded from the EIS "trigger" decision. However, having concluded that an environmental statement may be required on the TMI-1 restart by virtue of the psychological impacts alleged by respondents, the court of appeals ruled, consistent with the CEQ regulations, that those secondary social and economic impacts would have to be considered in any environmental statement which the NRC decided to prepare. See 678 F.2d at 230-231 (Pet. App. 29a-30a). This ruling is not before the Court in these cases. Rather, petitioners have restricted their challenge to the court of appeals' conclusion that the psychological effects associated with the restart of TMI-1 constitute an "environmental impact" under Section 102(2)(C) which is capable of triggering the requirement for an EIS.

TMI-1 restart is supported by Section 102(2)(C)(i) of NEPA, which addresses the "environmental impact" of a federal action that must be assessed in an EIS, rather than by Section 102(2)(C), which involves whether an EIS must be prepared. See *id.* at 24, 30-31.

We submit that the record demonstrates that the Commission's characterization of its decision below as an EIS "scope" decision is incorrect. Before the Atomic Safety and Licensing Board, the Commission staff prepared an environmental impact analysis (EIA) on the restart of Unit 1 (see J.A. 48-87) to assist the Board in deciding whether a new environmental impact statement was required. In that EIA, the staff addressed numerous physical impacts of the restarted unit. See NRC Br. 9, note 6. On the basis of this EIA, the Licensing Board determined that a new EIS on the restart was not required (*ibid.*), and its determiantion was affirmed by the Atomic Safety and Licensing Appeal Board (*In Re Metropolitan Edison Co. (Three Mile Island Power Station Unit 1)*, Docket No. 50-289 (ALAB-705)). See also NRC Br. 18, note 13 (the Appeal Board affirmed the "Licensing Board's determination * * * that *no full scale environmental impact statement* need be prepared" (emphasis added)).

The court of appeals recognized that the issue before it involved whether the NRC was required to prepare an EIS. However, the court characterized this issue in terms of the NRC's obligation to prepare a supplement to the EIS which had been prepared in conjunction with the licensing of TMI-1 in 1974, rather than an entirely new EIS on the restart. See 678 F.2d 224-227 (Pet. App. 23a-26a). This characterization, we believe, was incorrect. The duty to supplement an EIS arises prior to the time a final decision is reached on the federal action which is addressed in the EIS. See 40 C.F.R. 1502.9(c). This is because the supplement is intended to ensure that the EIS which is considered by the decisionmaker contains a full analysis of the environmental consequences

of the *proposed* action and the alternatives to it. Once a final decision on the action is taken, there clearly is no need to supplement the original EIS. Since the NRC had reached a final decision on the licensing of TMI-1 in 1978 and, indeed, since that decision was fully implemented with the construction of the facility, there was technically no need at the time of restart to "supplement" the earlier EIS. In any event, even if the court of appeals was correct in characterizing the NRC's NEPA obligations in terms of an EIS supplement, the fundamental question before the Commission was *whether* to prepare a new document on the environmental impacts of the TMI-1 restart, not *what* impacts to assess in a document which it had already decided to prepare. In declining to prepare any such new document, the Commission clearly was making the EIS "trigger" decision.[18]

NRC's position that the issue in these cases must be resolved in its favor consists of two parts.

First, it presents a radically new interpretation of Section 102(2)(C) of NEPA. It initially contends that the range of environmental impacts of a federal action which are applicable to the EIS "trigger" decision under Section 102(2)(C) is broader than the range of impacts applicable to the EIS "scope" decision under Section 102(2)(C)(i). See NRC Br. 24, 30-31. Having differentiated among an action's environmental impacts for purposes of the EIS "trigger" and "scope" decisions, it then contends that the impacts applicable to the "scope" decision are all the impacts which affect the natural and physical environment but only those non-physical impacts which are "proximately traceable to the impact of the federal action

---

[18] Of course, if the NRC had decided that a new EIS was required, it would not have been required to repeat in that statement any discussion of environment impacts which had been adequately addressed in the original TMI-1 EIS. It could have included any of the analysis in the original EIS by reference and dealt in the new EIS only with matters which had not been considered in the original EIS.

upon the natural or physical environment, or flow from a physically measurable or discernable variable, such as heat, radiation, noise, pollution, or odors in that environment." *Id.* at 27. See *id.* at 32, 43. Under the NRC interpretation, therefore, any non-physical impact of a federal action which lacks a "causal nexus" (*id.* at 28) with an impact upon the natural or physical environment does not qualify as an "environmental impact" and, as a result, is not to be assessed in any EIS.

Second, NRC applies its interpretation of Section 102(2)(C) to these cases by arguing that the psychological effects alleged by respondents are not "proximately traceable" to any physical environmental impact of the TMI-1 restart and therefore fall outside its NEPA assessment obligation. NRC Br. 44-48.

We address below only the first NRC contention and the interpretation of Section 102(2)(C) which it has presented to the court.[19] The Commission's interpretation represents a striking departure from the manner in which NEPA has been interpreted and applied since its enactment in 1970. If adopted by the Court, this interpretation would dramatically alter the obligations of federal agencies under NEPA. In particular, it would significantly reduce the scope, and therefore the value, of the environmental assessments which are conducted of major federal actions. Thus, in resolving the issue in these cases, we urge the Court to recognize that adoption of the NRC interpretation would have major implications for decisionmaking throughout the federal government.

For the reasons below, we believe that the NRC interpretation of Section 102(2)(C) must be rejected by the Court.

---

[19] We do not address NRC's second contention since our interest in these cases is in the interpretation of Section 102(2)(C) which the Commission has presented rather than the application of that interpretation to the particular circumstances surrounding the restart of TMI-1.

A. The NRC Interpretation of Section 102(2)(C) Is Not Supported by NEPA

Section 102(2)(C) of NEPA requires federal agencies, when making both their "trigger" and "scope" decisions, to consider the impacts which the action they are proposing will have upon the "human environment." Section 102(2)(C), which governs the "trigger" decision, requires the preparation of an EIS on any major action "significantly affecting the quality of the human environment * * *." Section 102(2)(C)(i), which governs the "scope" decision, requires that an EIS assess the "environmental impact" of the action. There is no suggestion in the Act that the same impact of a proposed action will qualify as an environmental impact for purposes of the "trigger" decision but not for purposes of the "scope" decision. Nor is there any suggestion in the Act that the same or similar impacts of an action will qualify as an environmental impact under Section 102(2)(C) if possessing a "causal nexus" with a natural or physical environmental impact, but will not qualify if lacking this nexus. Yet these are precisely the consequences of the interpretation of Section 102(2)(C) which the NRC has presented to the Court.

This is shown by the following hypothetical example.

A federal agency has proposed to license a series of major fossil-fuel energy facilities just outside of the town of Main, Wyoming. Main has a population of 1,000 people, lacks any industry, and is the center of a prosperous agricultural region. It is acknowledged that construction and operation of these facilities will have major non-physical impacts. Since the facilities require enormous amounts of water to conduct operations, they will cause substantial reductions in the water that is available to irrigate the region's farms. In fact, the decrease in irrigation water is so significant that it is expected that as many as 50 percent of the region's farms will lack adequate water to continue operations and that the hundreds of farmers thus displaced by the proposed action will migrate to Main to

seek employment and to re-establish their lives. It is also expected that the proposed energy facilities will attract many other farmers to the town, not because they will be forced to close their farms by the lack of water, but because they will be drawn to the higher wages and less burdensome working conditions which, if the proposed facilities are constructed, the town will offer. Finally, construction and operation of the facilities are expected to bring hundreds of other new residents into the town from outside the region.

The influx of farmers and outsiders will have serious social and economic impacts upon the Town of Main and its current population. The cost of the town's housing will be severely affected by the increased demand. Police, fire and other municipal services will have to be significantly increased with consequent demands upon the town's treasury. The new residents will require various goods and services which in turn will cause additional individuals to migrate into the area. Moreover, it is expected that the portion of the town's new residents who come from outside the region will differ considerably in background, values and lifestyle from the town's current residents and those who migrate from within the region. It is therefore expected that the rural tranquility which has characterized Main for over a half century will be significantly altered by the proposed federal action.

In determining whether an EIS is required on this proposed federal action, under the NRC interpretation of Section 102(2)(C), the agency would consider all the impacts of the action upon the human environment. See NRC Br. 24, 30-31. Thus in addition to the impacts on the region's water supply, the agency would take into account the impacts upon the Town of Main caused by the influx of farmers who would be displaced by the action, farmers who would voluntarily leave their farms, and outsiders. Assuming that these impacts were sufficient to trigger the requirement for an EIS, the agency would

then determine the impacts which it had to assess in the EIS.

Under the NRC interpretation of Section 102(2)(C), only *some* of the non-physical socioeconomic impacts of the action which are associated with the influx of new residents into the Town of Main would be assessed in the EIS. Since the closing of the region's farms and the migration of displaced farmers into the town would be "proximately traceable" to a physical environmental effect (the re-allocation of the region's water supply), the socioeconomic effects on the town produced by this migration would qualify as an "environmental impact," as interpreted by NRC, and would be assessed in the EIS. On the other hand, the migration of other farmers and of outsiders into the town and the socioeconomic effects which would follow would not be assessed in the EIS since the migration of these groups would not be caused by, or traceable to, any natural or physical environmental impact of the federal action.

In short, under the NRC interpretation, several significant impacts of this federal action would qualify as environmental impacts for purposes of the EIS "trigger" decision but not for purposes of the "scope" decision. Moreover, the same or similar non-physical impacts of the action would be given very dissimilar treatment under the same statutory terminology.

As indicated earlier, there is nothing in the language of NEPA to support these distinctions. There is no reason to consider "affecting the quality of the human environment" (Section 102(2)(C)) different from "environmental impact" (Section 102(2)(C)(i)). Simply stated, the Act provides no basis for treating the same impact of a federal action as an environmental impact in some situations but not in others.[20]

---

[20] As we discuss in Sections B and C below, CEQ and the courts have limited the consideration of some environmental impacts at the time of the EIS "trigger" decision but not at the time of the "scope"

In addition, the NRC interpretation is directly inconsistent with Section 102(2)(A) of NEPA, 42 U.S.C. 4332(2)(A). It requires all federal agencies, when planning and deciding actions which may impact on man's environment, to "utilize a systemic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts * * *." Since Section 102(2)(A), unlike Section 102(2)(C), does not apply only to major "actions significantly affecting the quality of the human environment," it clearly applies to the "trigger" decision which determines whether an EIS must be prepared. And, just as clearly, its mandate must be considered when interpreting the scope of the "environmental impact" which Section 102(2)(C) requires the EIS to assess.[21] Thus, when deciding whether to prepare EISs and when preparing them, the agencies are required by Section 102(2)(A) to utilize the social sciences to assess the impact of their proposed actions on the human environment. This mandate for the maximum use of the social sciences in federal decisionmaking demonstrates that Congress intended federal agencies, in EISs and elsewhere in their decision processes, to consider a broad range of the non-physical impacts that their actions might have. By significantly limiting the non-physical impacts which the agencies must assess in environmental impact statements, the NRC interpretation of Section 102(2)(C) is fundamentally at odds with this Congressional intent.

For these reasons, we submit that the NRC interpretation of Section 102(2)(C) lacks any support in the statute itself.

---

decision. However, this limitation is not based on the position that these impacts do not constitute an "environmental impact" under Section 102(2)(C) but rather that Congress simply did not intend them to trigger the EIS requirement by themselves.

[21] See p. 7, note 7 above.

B. The NRC Interpretation of Section 102(2)(C) Is Not Supported by the CEQ Regulations

The CEQ regulations on NEPA, which this Court has held are entitled to substantial deference (*Andrus v. Sierra Club*, 442 U.S. 347, 357-358 (1979)), do not provide any support for the interpretation of "environmental impact" which the NRC has presented in these cases.

The CEQ regulations do not treat the environmental impacts of a federal action separately for purposes of the EIS "trigger" and "scope" decisions. Rather, with one exception noted below (see pp. 23-24), in which they restrict the consideration of certain non-physical impacts at the time of the EIS "trigger" decision, the regulations provide that the two decisions are to be based upon the same environmental impacts. They provide no support for the NRC position that the range of impacts to be addressed in the "scope" decision is narrower than the range of impacts which are to be considered in the "trigger" decision.

The CEQ regulations do not directly define the Section 102(2)(C) phrase "affecting the quality of the human environment" or the Section 102(2)(C)(i) term "environmental impact." Rather, they define separately the terms "effects" and "human environment" and provide that these definitions govern both the "trigger" (see 40 C.F.R. 1502.3) and the "scope" (see 40 C.F.R. 1502.16(a), (b) and (d)) decisions.

Under the regulations, the terms "effects" and "impacts" are synonomous. See 40 C.F.R. 1508.8. "Effects" includes both "direct" and "indirect" effects. The former are effects "caused by the action and occur at the same time and place." 40 C.F.R. 1508.8(a). The latter are effects "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. 1508.8(b). Further, the regulations state that the following "effects," if "on the human environment," are subject to NEPA (40 C.F.R. 1508.8):

> Effects includes [sic] ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.

The CEQ definition of "human environment" provides that it "shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of 'effects' (§ 1508.8).)" 40 C.F.R. 1508.14. Thus, the Council has divided the "human environment" into two components—a physical and a non-physical environment, with the latter defined as "the relationship of people with [the physical] environment." It has then shown how this definition is to be interpreted by referring to its definition of "effects." In other words, "the relationship of people with [the physical environment]" is to be viewed in terms of the type or character of effects which federal actions may produce—namely, "ecological * * *, aesthetic, historic, cultural, economic, social, [and] health." 40 C.F.R. 1508.8.[22] Under the CEQ regulations, therefore, any proposed federal action which will affect the lives of people in one of these ways qualifies as an action "affecting the quality of the human environment" under Section 102(2)(C), and the Section 1508.8 "effects" that it will produce constitute environmental impacts for purposes of the "trigger" and "scope" decisions.[23]

---

[22] It is important to note that CEQ initially proposed to define the "human environment" as the natural and physical environment and the "interaction of people with that environment." Comments to the proposed definition suggested that the use of the term "interaction" would limit the definition to "the natural and physical aspects of the environment." Stating that this was not its intent, the Council replaced the term "interaction" with "relationship to ensure that the definition is intepreted as being inclusive of the human environment." 43 Fed. Reg. 55978, 55988 (November 29, 1978).

[23] NEPA, of course, requires more than just an impact upon the human environment for the EIS requirement to be triggered. Sec-

We emphasize that there is nothing in the CEQ regulations to support the NRC position that the non-physical effects of a federal action qualify as an "environmental impact" only if caused by a physical impact. On the contrary, the regulations specifically address the issue of causation in the definition of "effects." Both "direct" and "indirect" effects are defined as those "*caused by the [proposed federal] action* * * *" (emphasis added), not, as the NRC contends, as those caused by a physical environmental impact of the federal action.

Nonetheless, the NRC contends (NRC Br. 37-38) that its interpretation is fully consistent with the CEQ regulations. In this regard, it refers to the portion of the CEQ definition of "human environment" which provides that (40 C.F.R. 1508.14):

> economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

In fact, this provision plainly does not support the Commission's position. As CEQ explained in the preamble to its NEPA regulations, it added this provision to the definition of "human environment" to reflect the "line * * * drawn by the cases" which hold that "economic or social effects are not intended by themselves to require preparation of an environmental impact statement" and to incorporate the "Council's determination, which accords with the case law, that NEPA was not intended to require an environmental impact statement where the closing of a military base, for example, only affects such things as the composition of the population

---

tion 102(2)(C) requires that the impacts be significant before an EIS is required. See 40 C.F.R. 1508.27. The issue of significance is not before the Court in these cases.

or the level of personal income in a region." 43 Fed. Reg. 55978, 55988-55989 (November 29, 1978). In short, the intent of CEQ in adding this provision to the definition of "human environment" was to exclude from the NEPA "trigger" decision certain non-physical impacts of a proposed federal action when they were not accompanied by any physical environmental impacts.

Contrary to the NRC contention (NRC Br. 37-38), CEQ did not intend to exclude these non-physical impacts from the NEPA "scope" decision or to require that they have a "causal nexus" with a physical impact in order to qualify as an "environmental impact" which must be assessed in an EIS. On the contrary, in 40 C.F.R. 1508.14, CEQ specifically characterized these non-physical impacts as "environmental effects." Moreover, it specifically provided that, even though these impacts are not sufficient by themselves to trigger the requirement for an EIS, they are nonetheless to be included in the "scope" decision and assessed in an environmental impact statement as long as they are "interrelated" with—not caused by—a physical environmental impact of the action.[24]

For these reasons, we submit that the NRC interpretation of Section 102(2)(C) is in direct conflict with the CEQ regulations.

C. The NRC Interpretation of Section 102(2)(C) Is Not Supported by Decisions of the Federal Courts

The NRC argues that its interpretation of Section 102(2)(C) is supported by decisions of the federal courts. NRC Br. 38-40. We strongly disagree. We do

---

[24] The "interrelated" requirement in Section 1508.14 merely requires that there be a relationship between, or a common characteristic shared by, the physical and non-physical impacts of the federal action. This is satisfied, for instance, where the effects are similar or cumulative or where they stem from a common source. The requirement certainly does not show, as the NRC contends (NRC Br. 38), that Section 1508.14 "embodies and implements the requirement of environmental causation that is prescribed by Section 102(2)(C)(i)."

not know of any decision which holds or even suggests that, as the Commission contends, the consideration of non-physical impacts is broader for the EIS "trigger" decision than for the "scope" decision. Indeed, in *Hanly v. Kleindienst*, *supra*, 471 F.2d at 835, the Court of Appeals for the Second Circuit expressly recognized that "an agency, in making a threshold determination as to the 'significance' of an action, is called upon to review in general fashion *the same factors* that would be studied in depth for preparation of a detailed environmental impact statement * * *" (emphasis added). Nor are we aware of any decision which limits the non-physical environmental impacts of an action that are subject to Section 102(2)(C) to those which are "proximately traceable" to or possess a "causal nexus" with a physical environmental impact of the action. Finally, we do not know of any decision which, like the NRC, interprets the section in a manner which results in the same or very similar types of environmental impacts associated with a federal action receiving dissimilar "environmental impact" classifications.

We recognize that some courts have excluded certain non-physical environmental impacts from EIS decisions under Section 102(2)(C). However, they have done so on grounds considerably more narrow than those urged by the NRC. These decisions fall into two general categories.

First, some courts have excluded the non-physical impacts of a federal action from EIS decisions on the ground that the causal relationship between the federal action and the alleged impacts was too tenuous and therefore that the impacts were too speculative. For instance, in *Hanly v. Kleindienst*, *supra*, plaintiffs claimed that the General Services Administration was required to prepare an environmental impact statement on a detention facility which was proposed for their neighborhood. In refusing to require an EIS, the court declined to consider the "psychological distaste" which residents might have for such a facility. Such an effect of the proposed action, if con-

cluded, was simply too speculative. Thus, it stated (471 F.2d at 833):

> For the most part [plaintiffs'] opposition is based upon a psychological distaste for having a jail located so close to residential apartments. * * * It is doubtful whether psychological and sociological effects [25] upon neighbors constitute the type of factors that may be considered in making such a determination [*i.e.*, the EIS trigger decision] since they do not lend themselves to measurement. [footnote omitted.]

See *Concerned About Trident v. Rumsfeld*, 555 F.2d 817, 830 (C.A.D.C. 1977); *Trout Unlimited v. Morton*, 509 F.2d 1276, 1284 (C.A. 9, 1974).[26]

---

[25] The court's reference to "psychological and sociological effects" appears to have been to the jail's impact upon "the sensibilities of [the] neighborhood" (471 F.2d at 835), rather than to its social and economic impacts on the neighborhood. That the court was not suggesting that the socioeconomic impacts of a federal action might be excluded from the EIS decisions is shown by its earlier decision in *Hanly* where it held that environmental impacts under NEPA include "the quality of life for city residents" and it ordered the GSA, when making its EIS "trigger" decision, to consider the jail's effects upon "crime, congestion and even availability of drugs" since they "all affect the urban 'environment' * * *." 460 F.2d 640, 647.

[26] The statement quoted above from *Hanly v. Kleindienst* is the basis for the decisions of a number of courts not to require agencies to consider certain non-physical impacts of federal actions when making the EIS "trigger" decision. *E.g.*, *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225, 231 (C.A. 7, 1976), certiorari denied, 424 U.S. 967 (1976); *Maryland-National Capital Park and Planning Comm'n v. U.S. Postal Service*, 487 F.2d 1029, 1039 (C.A. D.C. 1973); *First National Bank of Chicago v. Richardson*, 484 F.2d 1369, 1380, note 13 (C.A. 7, 1973). These cases are cited by NRC in support of its contention that the "courts of appeals have uniformly recognized that psychological and *socioeconomic effects* that are not environmentally grounded [*i.e.*, that lack a 'causal nexus' with a physical environmental impact] are outside the scope of the analysis required by NEPA" (emphasis added). NRC Br. 38.

This contention is absolutely without merit. In none of the cases to which the NRC cites did the court hold that the "socioeconomic

Second, a number of courts have refused to require preparation of an environmental impact statement where the sole impacts of the proposed action were socioeconomic impacts.[27] These courts have concluded that Congress did not intend the non-physical socioeconomic impacts of a federal action, when unaccompanied by some impact upon the physical environment, to trigger the EIS requirement. *E.g., Goodman Group, Inc. v. Dishroom*, 679 F.2d 182, 185-186 (C.A. 9, 1982); *Image of Greater San Antonio, Texas v. Brown*, 570 F.2d 517, 522 (C.A. 5, 1978); *Breckinridge v. Rumsfeld*, 537 F.2d 864, 865-866 (C.A. 6, 1976), certiorari denied, 429 U.S. 1061 (1977). See *Como-Falcon Community Coalition, Inc. v.*

---

effects" of a federal action had to be linked to a physical environmental impact in order to qualify as a Section 102(2)(C) environmental impact. Indeed, the portions of these decisions upon which the NRC relies did not even involve any socioeconomic impacts of a federal project but instead, as in *Hanly*, a project's impacts upon the "sensibilities" of neighborhoods and the possible displeasure which it might cause individual residents because of their personal distaste for the nature of the project or the type of person who would be associated with it. *E.g., First National Bank of Chicago v. Richardson, supra*, 484 F.2d at 1380, note 13 (the proposed jail would affect the " 'sensibilities' of the neighborhood"); *Maryland-National Capital Park and Planning Comm'n. v. U.S. Postal Service, supra*, 487 F.2d at 1038-1039 (the proposed mail facility would cause "esthetic impact * * * pertain[ing] essentially to issues of individual and potentially diverse tastes"); *Nucleus of Chicago Homeowners Ass'n. v. Lynn, supra*, 524 F.2d at 231 (the proposed low-income housing project which would trigger the "fears of the neighbors of prospective public housing tenants"). Thus, in no sense do these cases support NRC's contention that the courts have "uniformly recognized" that socioeconomic impacts may qualify as Section 102(2)(C) environmental impacts only when causally linked to a physical impact of the federal action.

[27] Some of these decisions form the basis of the CEQ regulation at 40 C.F.R. 1508.14. See pp. 22-24 above. We note that these cases did not involve allegations that a federal action would offend personal tastes or "sensibilities." Rather, they typically involved population changes associated with federal actions and the attendant social and economic impacts upon existing communities.

United States Department of Labor, 609 F.2d 342, 345 (C.A. 8, 1979), certiorari denied, 446 U.S. 936 (1980). This conclusion has been based on the view that the primary concern of NEPA was with the physical environmental resources of the nation (see, *e.g.*, *Image of Greater San Antonio, Texas v. Brown*, *supra*, 570 F.2d at 522) and that limiting consideration of "[e]conomic, social, esthetic, or cultural effects" to EISs in which significant physical impacts are also discussed would best effectuate the intent of Congress in enacting NEPA (see, *e.g.*, *Goodman Group, Inc. v. Dishroom*, *supra*, 679 F.2d at 185).

We emphasize that the courts which have held that non-physical socioeconomic impacts may not by themselves cause an affirmative EIS "trigger" decision have not also held that these non-physical impacts may never be an "environmental impact" under Section 102 (2)(C) and therefore never need to be analyzed in an environmental impact statement. On the contrary, many of these courts and others, including some upon which the NRC relies (NRC Br. 38-39), have held that, where an environmental impact statement is required to be prepared on a proposed federal action, it must assess a broad range of the action's non-physical impacts, including increases in population and the demand for city services, changes in the rural or residential character of neighborhoods, unemployment, urban blight, crime, and pressures on community support facilities. *E.g.*, *Goodman Group, Inc. v. Dishroom*, *supra*, 679 F.2d at 185; *Jackson City, Missouri v. Jones*, 571 F.2d 1004, 1007 (C.A. 8, 1978); *Breckinridge v. Rumsfeld*, *supra*, 537 F.2d at 865-866; *Hanly v. Kleindienst*, *supra*, 471 F.2d at 827; *Monarch Chemical Works, Inc. v. Exxon*, 466 F. Supp. 639, 655 (D. Neb. 1979); *Metlakatla Indian Community v. Adams*, 427 F. Supp. 871, 875 (D.C.C. 1977). Moreover, the courts in these cases have not required this assessment of non-physical impacts only after finding that they were caused by or were promixately traceable to an impact of the federal action on the physi-

cal environment. Rather, they have followed the CEQ regulations and have required the EIS to consider all important social, economic and other non-physical "environmental effects" (40 C.F.R. 1508.14) which were "caused by the action" (40 C.F.R. 1508.8).

We therefore submit that the federal court decisions provide no support for the interpretation of Section 102 (2) (C) which the NRC urges the Court to adopt.

D. The NRC Interpretation of Section 102(2)(C) Is Not Supported by Agency Practice Under NEPA

Finally, we emphasize that, to the best of our knowledge, the "causal nexus" interpretation of "environmental impact" presented by the NRC has never been followed by the federal agencies. Once a decision to prepare an EIS is made, the practice of federal agencies is to prepare and issue a statement which assesses a broad range of the non-physical impacts of the proposed action and of its alternatives, whether or not these impacts are caused by or stem from any physical impact.

For instance, the environmental statement lodged with the Court in *Kleppe v. Sierra Club*, 427 U.S. 390 (1976), which addressed the environmental impact of federal coal leasing in the Eastern Powder River Coal Basin of Wyoming assessed numerous social, economic and other non-physical impacts of the proposed federal action, even though most lacked any "causal nexus" with the physical effects of the proposed coal development.[28] Similarly, the environmental statements prepared subsequent to the Court's decision in *Kleppe* which addressed other federal coal leasing decisions in the Northern Great Plains assessed a wide range of non-physical impacts, despite the absence of any "causal nexus" with physical impacts of the actions.

---

[28] Final Environmental Impact Statement, "Eastern Powder River Coal Basin of Wyoming" (Department of Agriculture, Department of Interior and Interstate Commerce Commission; October 18, 1974), pp. I-392 to I-458, I-554 to I-612, and I-664 to I-669.

Thus, in calling for a significant reduction in the environmental impacts assessed in an environmental impact statement, the NRC interpretation of Section 102(2)(C) runs counter to the manner in which the federal agencies have consistently interpreted and applied the section.

CONCLUSION

For these reasons, we submit that the NRC's interpretation of Section 102(2)(C) is invalid and should not be utilized by the Court in deciding the issue in these cases. Rather, the issue should be decided on the basis of existing NEPA law, namely, the CEQ regulations and the federal court decisions discussed above which interpret Section 102(2)(C). Thus, the Court should determine whether Congress intended the type of environmental impacts alleged by respondents, either standing alone or in conjunction with the physical impacts of the TMI-1 restart, to *trigger* the requirement for an environmental impact statement. This determination, we submit, should be made without regard to the presence or absence of any "causal nexus" between the impacts alleged by respondents and the impacts of the restart on the natural or physical environment. Moreover, this determination need not resolve whether the impacts alleged by respondents must be included in the EIS "scope" decision since this question is not before the Court.

Respectfully submitted,

BRUCE J. TERRIS
PHILIP G. SUNDERLAND
TERRIS & SUNDERLAND
1526 18th St., N.W.
Washington, D.C. 20036
(202) 332-1882
Attorneys for the American Sociological Association

January 29, 1983

Office-Supreme Court, U.S.
FILED
JAN 29 1983
STEVAS,
CLERK

Nos. 81-2399 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, *et al.*,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF OF *AMICUS CURIAE* AMERICAN PSYCHOLOGICAL ASSOCIATION IN SUPPORT OF RESPONDENTS

MARGARET FARRELL EWING
(Counsel of Record)
GEOFFREY P. MILLER
BRUCE J. ENNIS
ENNIS, FRIEDMAN, BERSOFF & EWING
Suite 511
1200 Seventeenth Street, N.W.
Washington, D.C. 20036
(202) 775-8100
Attorneys for Amicus Curiae
American Psychological Association

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	iii
INTEREST OF *AMICUS CURIAE*	1
INTRODUCTION AND SUMMARY OF ARGUMENT	3
ARGUMENT	4
I. CONGRESS INTENDED TO PROTECT PSYCHOLOGICAL HEALTH AS WELL AS PHYSICAL HEALTH UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT	4
A. One Of The Major Goals Of The National Environmental Policy Act Is The Protection of Human Health	4
B. Psychological and Physical Health Are Interrelated Aspects of Human Health	5
II. THE IMPAIRMENT OF PSYCHOLOGICAL HEALTH CAN BE IDENTIFIED, MEASURED AND PREDICTED	6
A. Psychology Is A Science Studying Human Cognition, Emotion And Behavior	6
B. There Are Professionally Accepted Methods For Measuring The Effects Of Stressful Events On The Psychological Health of Individuals	7
C. There Are Professionally Accepted Methods For Measuring The Effects Of Stressful Events On The Psychological Health Of Selected Populations	17
D. There Are Professionally Accepted Methods For Estimating The Effect Of Future Stressful Events On Psychological Health	18
III. THE NRC WILL NOT BE UNDULY BURDENED BY A REQUIREMENT THAT IT EVALUATE INFORMATION CONCERNING PSYCHOLOGICAL HEALTH EFFECTS OF RESTARTING THE TMI REACTOR	19

TABLE OF CONTENTS—Continued

Page

A. The Lower Court Held Only That NEPA Requires The NRC To Evaluate Information Concerning Psychological Health Effects of Restarting The TMI Reactor In Order To Determine Whether A Supplemental Environmental Impact Statement Should Be Prepared 19

B. Existing Studies of the TMI Population Provide Valuable Information Concerning The Psychological Health of TMI Residents 21

C. Further Studies Of Psychological Health Effects At TMI Could Be Undertaken By The NRC Quickly And Inexpensively 26

IV. IMPAIRMENTS OF PSYCHOLOGICAL HEALTH EXPERIENCED BY RESIDENTS OF THE TMI AREA IN CONNECTION WITH THE RESTART OF TMI-1 CAN BE SIGNIFICANTLY ALLEVIATED THROUGH THE USE OF STRESS MANAGEMENT TECHNIQUES 27

CONCLUSION 29

TABLE OF AUTHORITIES

CASES: Page

Calvert Cliffs, 449 F.2d 1109, 1128 (D.C. Cir. 1971) 27
Environmental Defense Fund v. Corps. of Engineers, 492 F.2d 1123 (5th Cir. 1974) 27
In Matter of Metropolitan Edison Company, 11 NRC 297 (1980) 27
Kleppe v. Sierra Club, 427 U.S. 390 (1976) 21
People Against Nuclear Energy v. United States Nuclear Regulatory Commission, 678 F.2d 222 (D.C. Cir. 1982) 3, 4
Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980) 22

STATUTES AND REGULATIONS:

National Environmental Policy Act of 1976:

42 U.S.C. § 4321 2
42 U.S.C. § 4331(b) 4
42 U.S.C. § 4332(2)(A) 2
42 U.S.C. § 4332(2)(C)(i) 2
42 U.S.C. § 4332(2)(C)(ii) 2

Code of Federal Regulations:

40 C.F.R. 1500.2(a) 27
40 C.F.R. 1500.2(e) 27
40 C.F.R. 1500.2(f) 27
40 C.F.R. 1502.6 2
40 C.F.R. 1502.22 27

LEGISLATIVE HISTORY:

Congressional Record:

115 Cong. Rec. 1692 (Feb. 18, 1969) 2
115 Cong. Rec. S. 1780 (Feb. 18, 1969) 6
115 Cong. Rec. S. 1784 (Feb. 18, 1969) 6

PUBLICATIONS:

A. Ax, *The Physiological Differentiation Between Fear and Anger in Humans*, 15 PSYCHOSOMATIC MEDICINE 433 (1953) 14

TABLE OF AUTHORITIES—Continued

Page

I. Ajzen, & M. Fishbein, *Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research*, 84 PSYCHOLOGICAL BULLETIN 888 (1977) 25

I. Ajzen & M. Fishbein, UNDERSTANDING ATTITUDES AND PREDICTING SOCIAL BEHAVIOR (1980) 25

A. Barton, COMMUNITIES IN DISASTER (1972) 17

A. Baum *et al.*, CHRONIC AND ACUTE STRESS ASSOCIATED WITH THREE MILE ISLAND ACCIDENT AND DECONTAMINATION, PRELIMINARY FINDINGS OF A LONGITUDINAL STUDY (Draft report submitted to USNRC, 1981) 21, 24, 26

A. Baum *et al.*, PSYCHOLOGICAL STRESS FOR ALTERNATIVES OF DECONTAMINATION OF THREE-MILE ISLAND-2 REACTOR BUILDING ATMOSPHERE (USNRC Report 1980) 9, 21, 24

A. Baum, N. Grunberg and J. Singer, *The Use of Psychological and Neuroendocrinological Measurements in the Study of Stress*, HEALTH PSYCHOLOGY (1982) 10, 14

A. Beck, COGNITIVE THERAPY AND THE EMOTIONAL DISORDERS (1976) 29

Blanchard and Andrasik, *Psychological Assessment and Treatment of Headache: Recent Developments and Emerging Issues*, 50 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 859 (1982) 29

E. Bliss, C. Migeon, C. Branch, & L. Samuels, *Reaction of the Adrenal Cortex to Emotional Stress*, 18 PSYCHOSOMATIC MEDICINE 56 (1956) .. 15

AND CLINICAL PSYCHOLOGY 880 (1982) 29

Burkovec, *Insomnia*, 50 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 880 (1982) 29

J. Brohut, L. Levi and H. Reichard, *Urinary Excretion of Adrenal Cortical and Medullary Hormones*, ACTA MEDICA SCANDINAVIA, (1970) 16

E. Bromet & L. Dunn, *Mental Health of Mothers Nine Months After the Three Mile Island Accident*, 14 URBAN AND SOCIAL CHANGE REVIEW 12 (1981) 24

TABLE OF AUTHORITIES—Continued

Page

E. Bromet, *et al.*, PRELIMINARY REPORT ON THE MENTAL HEALTH OF THE THREE MILE ISLAND RESIDENTS (1980) 21, 24

E. Bromet, *et al.*, THREE MILE ISLAND: MENTAL HEALTH FINDINGS 76 (NIMH Contract #278-79-0049 SM 1980) 23, 24

E. Bromet, H. Schulberg & L. Dunn, *Reactions of Psychiatric Patients to the Three Mile Island Nuclear Accident*, ARCHIVES OF GENERAL PSYCHIATRY (in press) 21

R. Chisholm, *et al.*, *Behavioral and Mental Health Effects of the TMI Accident on Nuclear Workers: A Preliminary Report*, 365 ANNALS OF THE NEW YORK ACADEMY OF SCIENCES 134 (1981) 22

R. Chisholm and S. Kasl, *The Effects of Work Site, Supervisory Status, and Job Function on Nuclear Workers' Responses to the TMI Accident*, JOURNAL OF OCCUPATIONAL BEHAVIOR (in press) 21

J. Christian, *The Pathology of Overpopulation*, 128 MILITARY MEDICINE 571 (1963) 15

S. Cohen, *Aftereffects of Stress on Human Performance and Social Behavior: A Review of Research and Theory*, 87 PSYCHOLOGICAL BULLETIN 578 (1980) 12

S. Cohen, G. Evans, D. Krantz, & D. Stokols, *Physiological, Motivational and Cognitive Effects of Aircraft Noise on Children: Moving From the Laboratory to the Field*, 35 AMERICAN PSYCHOLOGIST 231 (1980) 13

Creer, *Asthma*, 50 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 912 (1982) 29

Davidson & Jaccard, *Variables That Moderate the Attitude-Behavior Relation: Results of a Longitudinal Survey*, 37 JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY 1364 (1979) 25

J. Davis, R. Morrill, J. Fawcett, V. Upton, D. Bondy, & H. Spiro, *Apprehension and Elevated Serum Cortisol Levels*, 6 JOURNAL OF PSYCHOSOMATIC RESEARCH 82 (1962) 15

TABLE OF AUTHORITIES—Continued

Page

L. Derogatis, K. Rickels and A. Rock, *The SCL-90 and the MMPI: A Step In The Validation of a New Self-Report Scale*, 128 BRITISH JOURNAL OF PSYCHIATRY 280 (1976) 11

B. Dohrenwend, *et al.*, *Report of the Task Group on Behavioral Effects*, STAFF REPORTS TO THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THE THREE MILE ISLAND (U.S.G.P.O. 257-308, 1979) 8, 22, 23, 24

Egnert, Battit, Welch & Bartless, *Reduction of Post-Operative Pain By Encouragement and Instruction of Patients*, 270 NEW ENGLAND JOURNAL OF MEDICINE 825 (1964) 28

F. Elmadjian & G. Pincus, *The Adrenal Cortex and the Lympho-cytopenia of Stress*, 37 ENDOCRINOLOGY 47 (1945) 15

K. Erikson, EVERYTHING IN ITS PATH: DESTRUCTION OF COMMUNITY IN THE BUFFALO CREEK FLOOD (1976) 18

Fazio and Zanna, *Direct Experience and Attitude-Behavior Consistency*, 14 ADVANCES IN EXPERIMENTAL SOCIAL PSYCHOLOGY (L. Berkowitz, ed., 1981) 25-26

Fechner, ELEMENTS OF PSYCHOPHYSICS (1860) 7

C. Flynn, THREE MILE ISLAND TELEPHONE SURVEY, PRELIMINARY REPORT ON PROCEDURES AND FINDINGS (USNRC, 1979) 22

M. Frankenhaeuser, *Experimental Approaches to the Study of Catecholamines and Emotion*, 392 REPORTS FROM THE PSYCHOLOGICAL LABORATORIES, UNIVERSITY OF STOCKHOLM (1973) 16

M. Frankenhaeuser, *Sympathetic-adrenomedullary Activity, Behavior and the Psychosocial Environment*, RESEARCH IN PSYCHOPHYSIOLOGY (P. Venables & M. Christie, eds., 1975) 14

M. Frankenhaeuser & G. Jarpe, *Psychophysiological Changes During Infusions of Adrenaline In Various Doses*, 4 PSYCHOPHARMACOLOGIA 424 (1963) 12

TABLE OF AUTHORITIES—Continued

Page

M. Frankenhaeuser, G. Jarpe & G. Mattell, *Effects of Intravenous Infusions of Adrenaline and Noradrenaline on Certain Physiological and Psychological Functions*, 51 ACTA PHYSIOLOGIA SCANDINAVIA 175 (1961) 12

M. Frankenhaeuser and G. Johansson, *Task Demand as Reflected in Catecholamine Excretion and Heart Rate*, JOURNAL OF HUMAN STRESS (1976) 15

M. Frankenhaeuser, B. Nordheden, A. Myrsten & B. Post, *Psychological Reactions to Understimulation*, 35 ACTA PSYCHOLOGIA 298 (1971) 16

J. Frost, R. Dryer, & K. Kohlstaedt, *Stress Studies on Auto Race Drivers*, 38 JOURNAL OF LABORATORY AND CLINICAL MEDICINE 523 (1951) 15

R. Gatchel, *Comparative Effectiveness of Group Administered Desensitization in an Education/Discussion Group Procedure in Reducing Dental Fear*, 101 JOURNAL OF THE AMERICAN DENTAL ASSOCIATION 634 (1980) 29

R. Gatchel & A. Baum, INTRODUCTION TO HEALTH PSYCHOLOGY (1983) 29

D. Glass and J. Singer, URBAN STRESS: EXPERIMENTS ON NOISE AND SOCIAL STRESSORS (1972) .. 9

M. Goldhaber, P. Houts, R. DiSabella, MOBILITY OF THE POPULATION WITHIN 5 MILES OF THREE MILE ISLAND DURING THE PERIOD FROM AUGUST 1979 THROUGH JULY 1980 (Report to TMI Advisory Panel on Health Research Studies of the Pa. Dept. of Health, 1981) 22

Governor's Office of Policy Planning, THE SOCIO-ECONOMIC IMPACTS OF THE THREE MILE ISLAND ACCIDENT: FINAL REPORT (1980) 22

L. Herrington & J. Nelbach, *Relation of Gland Weights to Growth and Aging Processes in Rats Exposed to Certain Environmental Conditions*, 30 ENDOCRINOLOGY 375 (1942) 15

TABLE OF AUTHORITIES—Continued

Page

Hollis, Connor & Matarazzo, LIFESTYLE BEHAVIORAL HEALTH, AND HEART DISEASE, BEHAVIORAL MEDICINE AND CLINICAL PSYCHOLOGY: OVERLAPPING AREAS (R. Gatchel, A. Baum, & J. Singer, eds., 1982) 28

T. Holmes & M. Masuda, LIFE CHANGE AND ILLNESS SUSCEPTIBILITY, STRESSFUL LIFE EVENTS: THEIR NATURE AND EFFECTS (B. S. Dohrenwend & B. P. Dohrenwend, eds., 1974) 11

K. Holroyd and R. Lazarus, STRESS, COPING AND SOMATIC ADAPTATION, in HANDBOOK OF STRESS (Goldberger and Breznitz eds. 1982) 9

R. Holt, METHODS IN CLINICAL PSYCHOLOGY; PREDICTION AND RESEARCH (1978) 18

P. Houts *et al.*, HEALTH-RELATED BEHAVIORAL IMPACT OF THE THREE MILE NUCLEAR INCIDENT PARTS I AND II (Report to TMI Advisory Panel on Health Research Studies of the Pa. Dept. of Health, 1980) 22

P. Houts, *et al.*, HEALTH RELATED BEHAVIORAL IMPACT OF THE THREE MILE ISLAND NUCLEAR INCIDENT, PART III, (Report to TMI Advisory Panel on Health Research Studies of the Pa. Dept. of Health, 1981) 22

P. Houts, R. DiSabella, M. Goldhaber, *Extent and Duration of Psychological Distress of Persons in the Vicinity of Three Mile Island*, 54 PROCEEDINGS OF THE PENNSYLVANIA ACADEMY OF SCIENCES 22 (1980) 22

P. Houts & M. Goldhaber, *Psychological and Social Effects on the Population Surrounding TMI After the Nuclear Accident on March 28, 1979*, in ENERGY, ENVIRONMENT AND THE ECONOMY (S. Majumadar ed. 1981) 22, 24

T. Hu, *et al.*, HEALTH-RELATED ECONOMIC COSTS OF THE THREE MILE ISLAND ACCIDENT (Report submitted to TMI Advisory Panel on Health Research Studies of the Pa. Dept. of Health, 1981) .. 22

TABLE OF AUTHORITIES—Continued

Page

M. Jacobs, A. Spilken, A. Norman & L. Anderson, *Life Stress and Respiratory Illness*, 32 PSYCHOSOMATIC MEDICINE 233 (1970) 11

E. Jacobsen, PROGRESSIVE RELAXATION (1938) 29

I. Janis, G. Mahl, J. Kagan and R. Holt, PERSONALITY: DYNAMICS, DEVELOPMENT, AND ASSESSMENT, pp. 64-92 (I. Janis ed., 1969) 19

S. Kasl, R. Chisholm & B. Eskenazi, *The Impact of the Accident at the Three Mile Island on the Behavior and Well-Being of Nuclear Workers: Part I. Perceptions and Evaluations, Behavioral Responses, and Work-Related Attitudes and Feelings*, 71 AM. J. OF PUBLIC HEALTH 472 (1981) 22

S. Kasl, R. Chisholm & B. Eskenazi, *The Impact of the Accident at the Three Mile Island on the Behavior and Well-Being of Nuclear Workers: Part II. Job Tension, Psychophysiological Symptoms, and Indices of Distress*, 71 AM. J. OF PUBLIC HEALTH 484 (1981) 22, 23

S. Kasl & S. Cobb, VARIABILITY OF STRESS EFFECTS AMONG MEN UNDERGOING JOB LOSS, (New York Free Press, L. Goldberger and S. Breznitz 1982) 9

Kellner, *Psychiatric Ill Health Following Physical Illness*, 112 BRITISH JOURNAL OF PSYCHIATRY 71 (1966) 6

P. Lang, D. Rice, and R. Sternbach, *The Psychophysiology of Emotion*, HANDBOOK OF PSYCHOPHYSIOLOGY (N. Greenfield & R. Sternbach, eds., 1972) 13

T. Langner, *A Twenty-two Item Screening Scale of Psychiatric Symptoms Indicating Impairment*, 3 JOURNAL OF HEALTH AND HUMAN BEHAVIOR 269 (1962) 11

T. Langer, I. Janis & Wolfer, *Reduction of Psychological Stress in Surgical Patients*, 11 JOURNAL OF EXPERIMENTAL SOCIAL PSYCHOLOGY 155 (1975) 28

TABLE OF AUTHORITIES—Continued

Page

R. Lazarus, PSYCHOLOGICAL STRESS AND THE COPING PROCESS (1966) 8, 9, 10, 11

R. Lazarus &. R. Launier, STRESS-RELATED TRANSACTIONS BETWEEN PERSON AND ENVIRONMENT, INTERNAL AND EXTERNAL DETERMINANTS OF BEHAVIOR (L. Pervin & M. Lewis, eds., 1978) 11

R. Lazarus, J. Speisman, L. Davison & A. Mordkoff, *A Laboratory Study of Psychological Stress Produced by a Motion Picture Film*, 76 PSYCHOLOGICAL MONOGRAPHS (1962) 12, 14

L. Levi, *Stress and Distress in Response to Psychosocial Stimuli. Laboratory and Real Life Studies on Sympathoadrenomedullary and Related Reactions*, ACTA MEDICA SCANDINAVIA SUPP. 528 (1972) 16

L. Levi, *The Effect of Coffee on the Function of the Sympathoadrenomedullary System in Man*, 181 ACTA MEDICA SCANDINAVIA 431 (1967) 16

U. Lundberg & M. Frankenhaeuser, *Adjustment to Noise Stress*, 484 REPORTS FROM THE DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF STOCKHOLM (1976) 16

U. Lundberg & M. Frankenhaeuser, *Psychophysiological Reactions to Noise as Modified by Personal Control Over Noise Intensity*, BIOLOGICAL PSYCHOLOGY (1978) 16

J. Mason, *A Historical View of the Stress Field*, 22 JOURNAL OF HUMAN STESS 22 (1975) 9, 14, 15

Masuda & Holmes, 1975; Rahe, *Multi-cultural correlations of Life Change Scaling: America, Japan, Denmark and Sweden*, 13 JOURNAL OF PSYCHOSOMATIC RESEARCH 191 (1969) 11

B. Melamed & G. Siegel, BEHAVIORAL MEDICINE (1980) 28

Meyer, Nash, McAlister, Macoby & Farquhar, *Skills Training in Cardiovascular Health Education Campaigns*, 48 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 129 (1980) 28

TABLE OF AUTHORITIES—Continued

Page

L. Millon, C. Green and R. Meagher, HANDBOOK OF CLINICAL HEALTH PSYCHOLOGY (1982) 5

J. Morell & G. Spivak, *Review of Studies on the Psychological and Behavioral Impact of the TMI Nuclear Accident, with Specific Implications for Research and Planning* (Dept. of Mental Health Sciences, Hahnemann Medical College, unpublished 1980) 22

Nigro, *A Psychiatrist's Experiences in General Practice in a Hospital Emergency Room*, 214 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 1657 (1970) 6

P. Paulus, G. McCain, & V. Cox, *Death Rates, Psychiatric Commitments, Blood Pressure and Perceived Crowding as a Function of Institutional Crowding*, 3 ENVIRONMENTAL PSYCHOLOGY AND NONVERBAL BEHAVIOR 107 (1978) 13

R. Perry and M. Lindell, *The Psychological Consequences of Natural Disasters*; in MASS EMERGENCIES (1978) 18

E. Quarantelli and R. Dynes, *Response to Social Crisis and Disaster*, ANNUAL REVIEW OF SOCIOLOGY (1977) 18

R. Rahe, *Multi-cultural Correlations of Life Change Scaling: America, Japan, Denmark and Sweden*, 13 JOURNAL OF PSYCHOSOMATIC RESEARCH 191 (1969) 11

R. Rose & J. Mason, *Psychological State and Body Size as Determinants of 17-OHCS Excretion*, 121 ARCHIVES OF INTERNAL MEDICINE 406 (1968) 15

S. Schachter, *Pain, Fear and Anger in Hypertensives and Normotensives: A Psychophysiologic Study*, 19 PSYCHOSOMATIC MEDICINE 17 (1957) 14

H. Selye, *History and Present Status of the Stress Concept*, HANDBOOK OF STRESS, THEORETICAL AND CLINICAL ASPECTS (L. Goldberger and S. Breznitz, eds. (1982) 8

H. Selye, THE STRESS OF LIFE (1976) 14

TABLE OF AUTHORITIES—Continued

Page

H. Selye, STRESS IN HEALTH AND DISEASE (1976).. 8

J. Singer, U. Lundberg & M. Frankenhaeuser, *Stress on the Train: A Study of Urban Commuting*, 1 ADVANCES IN ENVIRONMENTAL PSYCHOLOGY (A. Baum, J. Singer & S. Valins, eds., 1978) 9, 16

Sterman and Friar, *Suppression Of Seizures In An Epileptic Following Sensorimotor EEG Feedback Training*, 33 ELECTROENCEPHOLOGY AND CLINICAL NEUROPHYSIOLOGY 89 (1972) 29

G. Stone, F. Cohen and N. Adler, HEALTH PSYCHOLOGY—A HANDBOOK (1979) 5

The President's Commission on the Accident at Three Mile Island, THE NEED FOR CHANGE: THE LEGACY AT TMI, 35 (1979) 23

P. Walker, W. Fraize, J. Gordon and R. Johnson, PROCEEDINGS OF THE WORKSHOP ON PSYCHOLOGICAL STRESS ASSOCIATED WITH THE PROPOSED RESTART OF THREE MILE ISLAND UNIT 1, 47-74 (1982) 26

M. Weissman and G. Klerman, *Epidemiology of Mental Disorders*, 35 ARCHIVES OF GENERAL PSYCHIATRY 705 (1978) 17

Whitehead and Bosmajian, *Behavioral Medicine Approaches To Gastrointestinal Disorders*, 50 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 976 (1982) 29

Wiley, HUMAN STRESS AND COGNITION: AN INFORMATION PROCESSING APPROACH (V. Hamilton and D. Warburton, eds. 1979) 12

Wolf and Godell, STRESS AND DISEASE (1968)..... 9

C. Wolff, S. Friedman, M. Hofer, & J. Mason, *Relationship Between Psychological Defenses and Mean Urinary 17-OHCS Excretion Rates: A Predictive Study of Parents of Fatally Ill Children*, 26 PSYCHOSOMATIC MEDICINE 576 (1964).. 15

J. Wolpe, THE PRACTICE OF BEHAVIOR THERAPY (1969) 29

TABLE OF AUTHORITIES—Continued

Page

L. Zegans, *Stress and the Development of Somatic Disorders in Handbook of Stress, Theoretical and Clinical Aspects* (Goldberger and Breznitz 1982) 5

MISCELLANEOUS:

United States Nuclear Regulatory Commission, Statement of Policy: Consideration of Psychological Stress Issues (July 16, 1982) 20

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399

METROPOLITAN EDISON COMPANY, *et al.*,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

No. 82-358

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF OF *AMICUS CURIAE* AMERICAN PSYCHOLOGICAL ASSOCIATION IN SUPPORT OF RESPONDENTS

INTEREST OF *AMICUS CURIAE*

The American Psychological Association (APA), a nonprofit scientific and professional organization founded in 1892, is the major association of psychologists in the United States. The APA has more than 55,000 members and includes the vast majority of psychologists holding doctoral degrees from accredited universities in the United States.

One of APA's major functions has been to promote psychological research, to improve research methods, and to disseminate information regarding human behavior

through meetings, scientific publications and special reports. A substantial and growing number of APA's members, including over 500 of its members who belong to the Division of Population and Environmental Psychology, and 1400 who belong to the Division of Health Psychology are systematically studying the psychological effects of various environments.

In enacting the National Environmental Policy Act (NEPA) 42 U.S.C. 4321 et seq., at issue here, Congress acknowledged that unnecessary destruction of the natural environment would exact a heavy price from the citizens of this country in illness and "physical and psychological discomfort." Remarks of the bill's sponsor, Senator Henry Jackson, 115 Cong. Rec. 1785 (Feb. 18, 1969). The hope was expressed that the "powerful new tools" provided by the "natural and behavioral sciences" could be used to fashion sound environmental policy.[1] Thus, in NEPA, Congress expressly directed federal agencies to use an "interdisciplinary approach," utilizing "natural and social sciences," in carrying out their obligations under NEPA. 42 U.S.C.A. § 4332(2)(A).

One such obligation is the requirement that federal agencies include in every recommendation for a major Federal action "significantly affecting the quality of the human environment, a detailed statement by the responsible official on (i) the environmental impact of the proposed action [and] (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, . . ." 42 U.S.C. § 4332(2)(C)(i) and (ii) (1976). The legislative history of these provisions make it clear that Congress intended agencies to use information from natural and behavioral sciences to determine environmental effects adverse to the psychological as well as the physical health of Americans. As an association of behavorial scientists and clinicians, the APA wishes to inform the Court about psychological methods and data relevant to the legal issues in this case.

---

[1] See also 40 CFR 1502.6 (1982).

Counsel for the parties have consented to the filing of this *amicus* brief. Their letters of consent have been filed with the Clerk.

INTRODUCTION AND SUMMARY OF ARGUMENT

At issue in this case is the refusal of the Nuclear Regulatory Commission (NRC) to receive and evaluate available information concerning the psychological harm which may be caused to area residents if the Reactor at Three Mile Island (TMI) is reactivated. The Court of Appeals held that NEPA requires the NRC to consider the psychological as well as the physical health effects of restarting the undamaged reactor at TMI.[2] The majority held that psychological effects are measurable, and that the severity of such effects is relevant to their cognizability under NEPA, and to whether a supplemental environmental impact statement is required.[3]

The NRC disagrees. It argues that NEPA does not require it to consider psychological effects of its actions unless those effects are caused by a change in the physical environment, which the NRC contends is not present at TMI.[4] The utilities, on the other hand, argue that NEPA does not require the NRC to consider any psychological effects, no matter how severe, resulting from its action, whether or not those effects are caused by changes in the physical environment.[5] Like Judge Wilkey, who dissented below, the utilities contend that effects of a restart on the psychological health of area residents cannot be measured or predicted and therefore cannot be weighed by the NRC.

As this brief will demonstrate, an understanding of the nature and causes of psychological harm confirms

---

[2] *People Against Nuclear Energy v. United States Nuclear Regulatory Commission*, 678 F.2d 222 (D.C. Cir. 1982).

[3] *Id.* at 230.

[4] Brief for the United States and the United States Nuclear Regulatory Commission at 20, 27, 28 and 43 [hereinafter cited as "NRC Brief"].

[5] Brief for Petitioners Metropolitan Edison Company *et al.* at 18-24, [hereinafter cited as "Utilities Brief"].

that, with the exception of direct physical injuries to the brain (such as from infection or bullets) psychological injury results from a person's perception of his environment. Thus, if psychological health is cognizable at all under NEPA, as the NRC seems to acknowledge, it must necessarily include psychological health effects resulting from people's perception of changes in their physical environment. This brief will inform the Court about current research, data, and methods which are available to the Nuclear Regulatory Commission (NRC), to identify, quantify and predict the psychological health effects of environmental factors relevant in this case.

As *amici* will show, the severity of psychological impairment can be measured both in individuals and selected populations and can be estimated or predicted for groups of people. The APA submits that the damage to psychological health in the population surrounding TMI is sufficiently measurable and predictable to be weighed by the NRC in deciding whether a supplemental environmental impact statement is warranted and to be taken into account in a cost/benefit analysis of the restart. Thus, *amicus* supports respondents' position and the Court of Appeals' ruling that the NRC must consider psychological health effects as well as physical health effects of restarting the undamaged reactor.

ARGUMENT

I. CONGRESS INTENDED TO PROTECT PSYCHOLOGICAL HEALTH AS WELL AS PHYSICAL HEALTH UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT.

A. One Of The Major Goals Of The National Environmental Policy Act Is The Protection Of Human Health.

Parties and *amicus* all agree that when it enacted NEPA Congress intended to protect human health.[6] The

---

[6] 42 U.S.C. § 4331(b)(2) and (3), NRC Brief at 27; Utilities Brief at 20-21. And see Judge Wilkey's dissenting opinion below, 678 F.2d 222, 238 (D.C. Cir. 1982).

government and the utilities also agree that the NRC has an obligation under NEPA to assess the potential damage to human *physical* health which results from the presence of radiation in the reactor at TMI or which would occur if there were another nuclear accident.[7] Yet, Congress wisely framed the law in terms of health, not further qualified as physical or psychological.

Many lines of evidence have persuaded psychologists, physicians, and other health scientists that health (and its converse, illness or pathology) refers to the status of the whole person as a functioning unit. When the person is incapacitated, unable to work or to otherwise function effectively, we speak of her or him as having impaired health (or as being sick), regardless of the degree to which the state of altered adequacy has more obvious physical or psychological manifestations. Often the distressing symptoms of illness cannot easily be fitted into the neat constructs that the utilities rely upon with their insistence that health be split at some imaginary dividing line into the purely physical (which they accept as important) and the purely psychological (which they apparently regard as not truly real, unmeasurable, and unimportant).[8] *Amicus* disagrees and submits that health, including both its physical and psychological manifestations are protected by NEPA.

B. Psychological And Physical Health Are Interrelated Aspects Of Human Health.

The utilities' argument that psychological health effects are not covered by NEPA is not supported in the legislative history of NEPA. As the sponsor of NEPA, Senator Henry Jackson, stated when he introduced the bill: "The

---

[7] NRC Brief at 29; Utilities Brief at 21.

[8] L. Millon, C. Green and R. Meagher, HANDBOOK OF CLINICAL HEALTH PSYCHOLOGY (1982); G. Stone, F. Cohen and N. Adler, HEALTH PSYCHOLOGY—A HANDBOOK (1979); L. Zegans, *Stress and the Development of Somatic Disorders*, in HANDBOOK OF STRESS, THEORETICAL AND CLINICAL ASPECTS (Goldberger and Breznitz 1982) (hereinafter cited as HANDBOOK OF STRESS).

purpose of this legislation is to lay the framework for a continuing program of research and study which will insure that present and future generations of Americans will be able to live in and enjoy an environment free of hazards to *mental and physical well being.*" (Emphasis added). 115 Cong. Rec. S. 1780 (Feb. 18, 1969).[9]

It has long been acknowledged that human health consists of both physical and psychological well being, and that the two are inseparable.[10] Increasingly, arbitrary distinctions between physical and psychological health are being replaced by acknowledgment that physical processes are influenced by psychological conditions, for example, as in gastric ulcers, and psychological processes are influenced by physical conditions, such as dementia associated with neurological disorders like Parkinson's disease.

II. THE IMPAIRMENT OF PSYCHOLOGICAL HEALTH CAN BE IDENTIFIED, MEASURED AND PREDICTED.

A. Psychology Is A Science Studying Human Cognition, Emotion And Behavior.

Psychology is the study of human cognition, emotion and behavior. It uses the approaches and methods of the natural sciences to generate knowledge about how and

---

[9] A report to the Senate Interior Committee introduced into the *Congressional Record* by Senator Jackson stated that recent dangers created by advanced science and technology and related to misuse of the environment included "disability and death from disease induced by environmental factors (for example, cancer, emphysema and *mental disorders*)." (Emphasis added) 116 *Cong. Rec.* S. 1784 (Feb. 18, 1969).

[10] *See generally* Kellner, *Psychiatric Ill Health Following Physical Illness*, 112 BRITISH JOURNAL OF PSYCHIATRY 71 (1966); Nigro, *A Psychiatrist's Experiences in General Practice in a Hospital Emergency Room*, 214 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 1657 (1970). Several scientific professional journals are devoted to the specialty of psychosomatics; for example, PSYCHOSOMATIC MEDICINE, PSYCHOSOMATICS and JOURNAL OF PSYCHOSOMATIC RESEARCH.

why people react to aspects of their environment in certain ways. Psychology combines knowledge from biological, social, psychological and physical health perspectives and is concerned with the development of principles and procedures for understanding, predicting and influencing behavior. It has been recognized as a unique field of scientific endeavor for over one hundred years, since the founding of Wilhelm Wundt's psychology laboratory in Leipzig, Germany in 1879. Even before that, the foundations of scientific psychology were laid down by Fechner in 1860, with his seminal work, Elements of Psychophysics, quantifying subjective phenomena such as visual sensations. From its earliest beginnings, then, psychology has been developing scientific methods of quantifying such impalpables as perceptions and emotional states.

Psychological research has increased our ability not only to identify and quantify human responses to our environment, but also our ability to make predictions about human behavior and mental states. The psychologist is interested in identifying the "intervening variables" in the humans or animals under study which mediate between the initiating environmental event or stimulus and the behavioral response. When a person's environment presents a threat to his or her well-being, i.e., when a stressful event occurs, his or her resulting physical and emotional processes are the intervening variables which determine the person's behavioral response. The study of stress, then, is concerned with the identification and measurement of the effect of stressful events on psychological and physiological processes.

B. There Are Professionally Accepted Methods For Measuring The Effect Of Stressful Events On The Psychological Health Of Individuals.

The NRC Licensing Board and the Court of Appeals correctly found that psychological health effects caused

by stressful events such as those at TMI can be measured sufficiently to be considered by the NRC.[11] Contrary to the unsupported assertions of the Petitioners and dissenting Judge Wilkey, psychological health effects are not "ephemeral," "speculative" and "entirely subjective". To the contrary, psychological health effects can be measured in several ways, including quantitative subjective measures and objective physiological and biochemical measures.

Stress is an important determinant of all health and well being. The presence or threat of danger triggers defensive responses in people, involving physiological arousal (increased secretion of epinephrine, heightened cardiovascular response, increased respiration, etc.) and emotional changes as the person prepares to fight the threat or flee. The resulting emotional and physical states are called stress.

The body can cope with stress but this coping has costs.[12] Long-term exposure to a stressful event, or repeated adaptive demands can deplete the body's reserves and lead to physical and psychological dysfunction. This relationship between severe or chronic stress and ill health, both psychological and physical, is supported by the correlation among anxiety, depression, tension, diminished concentration ability, insomnia, stomach ulcers, headaches, skin disorders and suppressed immune reactions.[13]

---

[11] 678 F.2d at 228-229; Certification to the Commission on Psychological Distress Issues by the Atomic Safety and Licensing Board, Feb. 22, 1980 LBP-80-8, 11 NRC 297 (1980) (Joint Appendix p. 36, note 8).

[12] R. Lazarus, PSYCHOLOGICAL STRESS AND THE COPING PROCESS (1966) [hereinafter cited as R. Lazarus], H. Selye, STRESS IN HEALTH AND DISEASE (1976); H. Seyle, *History and Present Status of the Stress Concept*, HANDBOOK OF STRESS.

[13] Note 10, *supra* and B. Dohrenwend, *infra* note 48.

Psychological variables play an important part in the interpretation of [14] and response to threatening events.[15] For example, psychological interpretations of environmental changes based on the subject's belief of his or her control of events influence corticosteroid secretion by the adrenal cortex.[16] In short, response to stressful events is determined by the degree to which an event is perceived as or believed to be threatening, harmful, or dangerous.[17] This belief depends on several factors, including attitudes toward the threat, prior experience with it, knowledge of its consequences, and evaluation of its apparent costs.

People respond not only to dangers that have materialized but also to threats, expectations or symbols of danger.[18] Anticipatory stress responses may last longer and ultimately be more damaging to the organism's health than the stressful event itself.

Evaluation of coping alternatives is also a crucial determinant of response to danger. Direct action responses occur when people try to manipulate or alter their relationship to the stressful situation. Thus, they may flee, attempt to destroy or remove the threat, or

---

[14] J. Mason, *A Historical View of the Stress Field*, 22 JOURNAL OF HUMAN STRESS 22 (1975).

[15] A. Baum *et al.*, PSYCHOLOGICAL STRESS FOR ALTERNATIVES OF DECONTAMINATION OF THREE MILE ISLAND-2 REACTOR BUILDING ATMOSPHERE (USNRC Report 1980); S. Kasl & S. Cobb, VARIABILITY OF STRESS EFFECTS AMONG MEN UNDERGOING JOB LOSS, in HANDBOOK OF STRESS.

[16] *E.g.*, J. Singer, U. Lundberg and M. Frankenhaeuser, *Stress on the Train: A Study of Urban Commuting*, 1 ADVANCES IN ENVIRONMENTAL PSYCHOLOGY (A. Baum, J. Singer & S. Valins, eds., 1978). D. Glass & J. Singer, URBAN STRESS: EXPERIMENTS ON NOISE AND SOCIAL STRESSORS (1972).

[17] R. Lazarus, *supra* note 12 and K. Holroyd and R. Lazarus, STRESS, COPING AND SOMATIC ADAPTATION, in HANDBOOK OF STRESS.

[18] Wolf and Godell, STRESS AND DISEASE (1968).

in other ways change the external environment. When the subject believes that none of these is possible, defensive reactions may take place. Here, individuals accommodate to stressful situations by altering their "internal" environment—taking drugs, drinking, and using other defense mechanisms.[19]

There are four basic approaches to the measurement of psychological health effects of stressful events, and all have been used in studies at Three Mile Island: first, self-report measures which involve direct questioning of subjects about their feelings, beliefs, opinions and symptoms; second, behavioral measures which either record coping mechanisms or measure some ability or skill during or after exposure to the stressful event; third, psychophysiological assessments of the responses by one or more organ systems (*e.g.*, cardiovascular, respiratory); and finally, biochemical measures of endocrine response to stressful conditions.[20] These different approaches measure different aspects of the subject's response to stressful situations over differing time periods. Although each can be influenced by factors unrelated to stress, these factors can usually be controlled. Together they provide a useful picture of the interrelated psychological and biological aspects of human response to stressful situations.[21]

Self-report Measures

The easiest way to determine whether people are experiencing adverse psychological health effects is to ask them. Indeed, the central symptoms of many psychological disorders such as paranoia or obsessional neurosis are subjective: the best way to find out whether a man feels that people are persecuting him or whether a woman

---

[19] R. Lazarus, *supra* note 12.

[20] A. Baum, N. Grunberg and J. Singer, *The Use of Psychological and Neuroendocrinological Measurements in the Study of Stress*, HEALTH PSYCHOLOGY (1982).

[21] *Id.*

is unable to carry on her daily life because she is preoccupied with distressing, unwanted thoughts, is to talk to each of them. The clinical interview therefore, has been the fundamental procedure of psychodiagnosis.

However, psychologists have discovered that written questions and answers save much time and they have long used written questionnaires for screening purposes. More recently, questionnaires have been refined and developed through statistical analysis and validation, so that today several such tests are in wide use, especially in large-sample research studies where individual interviewing might be prohibitively expensive. Generally, such questionnaires measure life events or experiences believed to be stressful,[22] emotional and somatic experiences associated with the event[23] or the aversiveness of the precipitating environmental conditions.[24] Economy, ease of ad-

---

[22] This type of measure does not assess stress as a process involving events and responses to them. Instead, stress is inferred from the magnitude of diruption or adjustment believed to be associated with each event. These studies generally report evidence of an increase in life change preceding the onset of many illnesses. T. Holmes & M. Masuda, *Life Change and Illness Susceptibility*, in STRESSFUL LIFE EVENTS: THEIR NATURE AND EFFECTS (B. Dohrenwend & B. Dohrenwend, eds., 1974) [hereinafter cited as STRESSFUL LIFE EVENTS]; M. Jacobs, A. Spilken, A. Norman & L. Anderson, *Life Stress and Respiratory Illness*, 32 PSYCHOSOMATIC MEDICINE 233 (1970); R. Rahe, *Multi-cultural correlations of Life Change Scaling: America, Japan, Denmark and Sweden*, 13 JOURNAL OF PSYCHOSOMATIC RESEARCH 191 (1969).

[23] Emotional components of stress, such as anxiety, depression, alienation, and fear have been measured in many ways, including use of psychiatric inventories such as the Langer index or the Symptom Checklist-90. T. Langner, *A Twenty-two Item Screening Scale of Psychiatric Symptoms Indicating Impairment*, 3 JOURNAL OF HEALTH AND HUMAN BEHAVIOR 269 (1962); L. Derogatis, K. Rickels & A. Rock, *The SCL-90 and the MMPI: A Step In The Validation of a New Self-Report Scale*, 128 BRITISH JOURNAL OF PSYCHIATRY 280 (1976).

[24] R. Lazarus, *supra* note 12. R. Lazarus & R. Launier, *Stress-related Transactions Between Person and Environment*, INTERNAL

ministration, and validity are all strengths of interview or questionnaire assessments.

Behavioral Measures

Performance measures are generally less susceptible to biases than are self-report measures. Performance assessments are based on the finding that psychological disorders can affect the quality of performance on tasks attempted during or after exposure to stressful conditions.[25] These consequences are among the more fully researched aspects of stress.[26] For example, in several studies, researchers have found that subjects who had been exposed to stressful conditions performed more poorly on a proofreading task that required a great deal of concentration than did subjects exposed to less aversive condi-

---

AND EXTERNAL DETERMINANTS OF BEHAVIOR (L. Pervin & M. Lewis, eds., 1978); R. Lazarus, J. Speisman, L. Davison, & A. Mordkoff, *A Laboratory Study of Psychological Stress Produced by a Motion Picture Film*, 76 PSYCHOLOGICAL MONOGRAPHS (1962).

One drawback of self-report approach is that a subject motivated to deceive can do so. For example, in the context of military induction, where attempts to simulate mental disorders are common, methods of distinguishing between genuine and faking self-reports have been developed—simulators generally lack accurate, detailed knowledge of the usual patterning of symptoms. For similar reasons, faked responses to self-report questionnaires or inventories can often be detected.

[25] Research has reported changes in performance among subjects given injections of "stress hormones" or catecholamines that generate arousal, *e.g.*, M. Frankenhaeuser & G. Jarpe, *Psychophysiological Changes During Infusions of Adrenaline In Various Doses*, 4 PSYCHOPHARMACOLOGIA 424 (1963); M. Frankenhaeuser, G. Jarpe & G. Mattel, *Effects of Intravenous Infusions of Adrenaline and Noradrenaline on Certain Physiological and Psychological Functions*, 51 ACTA PHYSIOLOGIA SCANDINAVIA 175 (1961), Wiley, *Human Stress and Cognition: An Information Processing Approach* (V. Hamilton and D. Warburton, eds. 1979).

[26] See S. Cohen, *Aftereffects of Stress on Human Performance and Social Behavior: A Review of Research and Theory*, 87 PSYCHOLOGICAL BULLETIN 578 (1980) for a review of these studies.

tions.[27] This difference in performance occurred after exposure to the stressful condition had been terminated, and apparently reflects a continuing cost of coping with it. Conditions other than stress can effect the performance of tasks, but these conditions can usually be controlled so that they do not influence the determination of the effects of stress.[28]

Physiological Changes

Many researchers studying the relation between environmental events and health describe a mediating chain of events in which stress produces physiological strains, which in turn may result in illness. Measurement of physiological strains often assesses arousal associated with the non-voluntary or sympathetic nervous system. Some investigators consider the startle response to be a prototype of arousal with its increases in heart rate, respiration, blood pressure, and cardiac stroke volume.[29] Measurements of sympathetic nervous system arousal have been used to indicate stress in several different research settings.[30] Heart rate, respiration rate, pulse wave velocity,

---

[27] D. Glass and J. Singer, URBAN STRESS: EXPERIMENTS ON NOISE AND SOCIAL STRESSORS (1972).

[28] For example, copy editors or other educated people would do better on proofreading tasks than less educated people, independent of the stress factor. However, truly random samples drawn from the similar experimental and control populations would result in each group having the same proportion of educated subjects. Correlations between education levels and performance levels for the experimental and control groups permit comparisons between the performance of the educated subgroups of each. Differences in their performances, then, would have to be attributed to some factor other than education.

[29] P. Lang, D. Rice, and R. Sternbach, *The Psychophysiology of Emotion*, HANDBOOK OF PSYCHOPHYSIOLOGY (N. Greenfield & R. Sternbach, eds., 1972).

[30] *E.g.*, S. Cohen, G. Evans, D. Krantz, & D. Stokols, *Physiological, Motivational and Cognitive Effects of Aircraft Noise on Children: Moving From the Laboratory to the Field*, 35 AMERICAN PSYCHOLOGIST 231 (1980); P. Paulus, G. McCain, & V. Cox, *Death Rates*,

and other measures have been found to be adversely affected by crowding, anger or fear, pain, and viewing gruesome films.[31]

Biochemical Changes

Part of the pathological process of environmentally induced impairments of health is an alteration in the delicate biochemical balance of the human body. Exposure to stressful events causes changes in levels of various hormones in blood or urine samples.[32] Secretion of cortiocosteroids by the adrenal cortex and of catecholamines by the adrenal medulla have been related to a variety of stressful psychosocial stimuli.[33]

Psychiatric Commitments, Blood Pressure and Perceived Crowding as a Function of Institutional Crowding, 3 ENVIRONMENTAL PSYCHOLOGY AND NONVERBAL BEHAVIOR 107 (1978).

[31] *E.g.*, A. Ax, *The Psychological Differentiation Between Fear and Anger in Humans*, 15 PSYCHOSOMATIC MEDICINE 433 (1953); R. Lazarus, J. Speisman, A. Mordkoff, & L. Davison, *supra*, note 24. S. Schachter, *Pain, Fear and Anger in Hypertensives and Normotensives: A Psychophysiologic Study*, 19 PSYCHOSOMATIC MEDICINE 17 (1957). Like the others, physiological measures have some limitations, but they can usually be accommodated. Blood pressure, for instance, may fluctuate significantly in the same subject over short periods of time and is affected by non-stress related factors such as exercise and position of the body. However, the effect of these factors can be eliminated by averaging repeated readings and by identifying non-stress factors and correlating them with blood pressure, so that similar control and non-control subgroups can be compared to determine the effect of the remaining independent variable-stress.

[32] M. Frankenhaeuser, *Sympathetic-adrenomedullary Activity, Behavior and the Psychosocial Environment*, RESEARCH IN PSYCHOPHYSIOLOGY (P. Venables & M. Christie, eds., 1975); J. Mason, *A Historical View of the Stress Field, Journal of Human Stress* 22 (1975); H. Selye, THE STRESS OF LIFE (1976).

[33] Psychological influences on the hypothalamic-pituitary-adrenal cortex axis, which regulates corticosteroid secretion, is among the most extensively studied endocrine system, and substantial evidence of psychosocial determination of adrenal cortical activity has been reported. A. Baum, *supra*, note 20.

Early stress research demonstrated that animals exposed to danger showed adrenal cortical enlargement and had higher levels of circulating corticosteroids.[34] Studies with human subjects also have linked increased adrenal cortical activity to stressful conditions such as crowding, athletic competition, changes in surroundings, loss of control, emergency duty in hospitals, and airplane flights.[35] Research has fairly well established that 17-hydroxycorticosteroids (17-OHCS), primary cortisol, are reliable indicators of stress,[36] and assays of both blood and urinary 17-OHCS have been perfected for the study of this relationship.[37]

Measurement of catecholamines has also proven to be a useful biochemical measure of stress.[38] Secreted by the adrenal medulla rather than by the adrenal cortex,

---

[34] See *e.g.*, F. Elmadjian & G. Pincus, *The Adrenal Cortex and the Lympho-cytopenia of Stress*, 37 ENDOCRINOLOGY 47 (1945); L. Herrington & J. Nelbach, *Relation of Gland Weights to Growth and Aging Processes in Rats Exposed to Certain Environmental Conditions*, 30 ENDOCRINOLOGY 375 (1942). J. Christian, *The Pathology of Overpopulation*, 128 MILITARY MEDICINE 571 (1963).

[35] *E.g.*, J. Davis, R. Morrill, J. Fawcett, V. Upton, D. Bondy, & H. Spiro, *Apprehension and Elevated Serum Cortisol Levels*, 6 JOURNAL OF PSYCHOMATIC RESEARCH 82 (1962); J. Frost, R. Dryer, & K. Kohlstaedt, *Stress Studies on Auto Race Drivers*, 38 JOURNAL OF LABORATORY AND CLINICAL MEDICINE 523 (1951); J. Mason, *supra*, note 14.

[36] *E.g.*, E. Bliss, C. Migeon, C. Branch, & L. Samuels, *Reaction of the Adrenal Cortex to Emotional Stress*, 18 PSYCHOSOMATIC MEDICINE 56 (1956).

[37] *E.g.*, J. Mason, *supra*, note 14; R. Rose & J. Mason, *Psychological State and Body Size as Determinants of 17-OHCS Excretion*, 121 ARCHIVES OF INTERNAL MEDICINE 406 (1968); C. Wolff, S. Friedman, M. Hofer, & J. Mason, *Relationship Between Psychological Defenses and Mean Urinary 17-OHCS Excretion Rates: A Predictive Study of Parents of Fatally Ill Children*, 26 PSYCHOSOMATIC MEDICINE 576 (1964)).

[38] M. Frankenhaeuser and G. Johansson, *Task Demand as Reflected in Catecholamine Excretion and Heart Rate*; JOURNAL OF HUMAN STRESS (1976).

catecholamines are an important element in the involuntary process of arousal. Thus, one would expect states of hypervigilance and related increases in catecholamines to accompany episodes of stress.[39] Research has confirmed this expectation, linking increased secretion of epinephrine and norepinephrine to such conditions as pain, lack of oxygen, crowding, and extreme temperatures as well as situations involving failure, threat, and uncertainty.[40] Researchers have also found that having control or the perception of control over aversive events reduced catecholamine response to these events. For instance, studies indicate that perceived control is associated with lower levels of catecholamines in response to noise and to crowding.[41]

---

[39] Catecholamine levels vary as a function of factors other than stress such as exercise, coffee, etc. The effect of these factors can and should be eliminated if such levels are to be used as a reliable and valid measurement of arousal. J. Brohut, L. Levi and H. Reichard, *Urinary Excretion of Adrenal Cortical and Medullary Hormones*, ACTA MEDICA SCANDINAVIA, (1970). L. Levi, *The Effect of Coffee on the Function of the Sympathoadrenomedullary System in Man*, 181 ACTA MEDICA SCANDINAVIA 431 (1967).

[40] *E.g.*, M. Frankenhaeuser, *Experimental Approaches to the Study of Catecholamines and Emotion*, 392 REPORTS FROM THE PSYCHOLOGICAL LABORATORIES, UNIVERSITY OF STOCKHOLM (1973); M. Frankenhaeuser, B. Nordeheden, A. Myrsten & B. Post, *Psychophysiological Reactions to Understimulation and Overstimulation*, 35 ACTA PSYCHOLOGIA 298 (1971); L. Levi, *Stress and Distress in Response to Psychosocial Stimuli. Laboratory and Real Life Studies on Sympathoadrenomedullary and Related Reactions*, ACTA MEDICA SCANDINAVIA SUPP. 528 (1972).

[41] *E.g.*, U. Lundberg & M. Frankenhaeuser, *Adjustment to Noise Stress*, 484 REPORTS FROM THE DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF STOCKHOLM (1976); U. Lundberg & M. Frankenhaeuser, *Psychophysiological Reactions to Noise as Modified by Personal Control Over Noise Intensity*, 6 BIOLOGICAL PSYCHOLOGY 51 (1978). J. Singer, U. Lundberg, M. Frankenhaeuser, *Stress on the Train: A Study of Urban Commuting*, 1 ADVANCES IN ENVIRONMENTAL PSYCHOLOGY (A. Baum, J. Singer, and S. Valins, eds., 1978).

Each of the four kinds of measures discussed here produces information about the organismic process initiated by a threatening environmental event and culminating in a breakdown in health. Although each of the measures has limitations and can be affected by factors other than stressful events, these factors can usually be controlled. Findings indicating stress on several measures strongly support the conclusion that psychological and physiological health effects of stress are present and being measured. Therefore, it is desirable to use as many measures as possible when studying the health effects of events such as those being litigated here.

C. There Are Professionally Accepted Methods For Measuring The Effect Of Stressful Events On The Psychological Health Of Selected Populations.

Epidemiological studies of the effect of stressful conditions are conducted by using the measures discussed above. Like epidemiological studies of physical characteristics, psychological epidemiology studies the prevalence of psychological characteristics in certain groups.[42] These studies record the psychological condition of individual subjects who are randomly selected from the population under study in sufficient numbers to constitute a statistically sound representative sample. Standardized tests are administered to the subjects by trained personnel to determine psychological characteristics. These tests may also be administered at specified intervals in order to measure changes over time.

Where a study is undertaken to determine the effect of an event on the psychological health of a selected population, it is necessary to have comparable information for the same population before the event or to have comparable information for similar or "control" populations which have not experienced the stressful event. Questionnaires gather information on demographic charac-

---

[42] M. Weissman and G. Klerman, *Epidemiology of Mental Disorders*, 35 ARCHIVES OF GENERAL PSYCHIATRY 705 (1978).

teristics of the sample—age, sex, race, education, occupation, etc.—as well as information on stressful work conditions, personal mental health history, current psychological symptoms and social supports available to mitigate effects of stress (family, friends, social organizations, etc.). These data are used to establish the characteristics necessary to select a control group.

By means of statistical analysis the psychologist can determine groups of variables that cluster and define subgroups of the sample, such as those subjects suffering neurotic anxiety or depression. Studies of the effect on the psychological health of survivors of various disasters such as tornadoes, and flooding can be conducted in this manner.[43] This kind of epidemiological study has been conducted at Three Mile Island and will be discussed below.

D. There Are Professionally Accepted Methods For Estimating The Effect Of Future Stressful Events On Psychological Health.

Not only does psychology study and measure existing psychological characteristics, psychology has as one of its goals the prediction of future behavior. Psychologists have been quite successful in predicting collective human behavior, such as voting patterns in elections, academic grades in college, and consumer behavior.[44] Prediction of future behavior depends upon an understanding of the relationship between specific antecedent conditions and behavioral responses in the past.

Psychological research, particularly research into the psychological effects of exposure by combat soldiers to

---

[43] See generally K. Erikson, EVERYTHING IN ITS PATH: DESTRUCTION OF COMMUNITY IN THE BUFFALO CREEK FLOOD (1976); A. Barton, COMMUNITIES IN DISASTER (1972); R. Perry and M. Lindell, *The Psychological Consequences of Natural Disasters*; in MASS EMERGENCIES (1978); E. Quarantelli and R. Dynes, *Response to Social Crisis and Disaster*, ANNUAL REVIEW OF SOCIOLOGY (1977).

[44] R. Holt, METHODS IN CLINICAL PSYCHOLOGY; PREDICTION AND RESEARCH (1978).

extreme danger and near misses, supports the theory that people who are faced with severe threats to their physical safety, though they may not be injured or even touched, generally acquire a marked increase in sensitivity to similar threatening stimuli in the future. The concept of sensitization applies to instances in which people once traumatized by a frightening experience show signs of unusually high arousal upon the presentation of formerly neutral stimuli now associated with the traumatic experience.

The arousal and psychological distress exhibited by near miss victims can be explained as a new sense of vulnerability—a realization that injury and death are real possibilities or probabilities to be warded off and defended against. They can also be explained as examples of learned or conditioned emotional response—emotional arousal resulting from reexperiencing the fear-evoking stimuli. On the whole, people who have near-miss experiences have more intense emotional distress when the same danger is threatened again than will people who have never experienced the threat or a near miss.[45]

III. THE NRC WILL NOT BE UNDULY BURDENED BY A REQUIREMENT THAT IT EVALUATE INFORMATION CONCERNING PSYCHOLOGICAL HEALTH EFFECTS OF RESTARTING THE TMI REACTOR.

A. The Lower Court Held Only That NEPA Requires The NRC To Evaluate Information Concerning Psychological Health Effects Of Restarting The TMI Reactor In Order To Determine Whether A Supplemental Environmental Impact Statement Should Be Prepared.

Before a determination can be made whether psychological health effects can be measured sufficiently to be considered by the NRC, it is necessary to understand

---

[45] I. Janis, G. Mahl, J. Kagan, and R. Holt, PERSONALITY: DYNAMICS, DEVELOPMENT, AND ASSESSMENT, pp. 64-92 (I. Janis ed. 1969).

for what purpose the Court of Appeals ordered the NRC to consider such information.

The Court of Appeals' decision is narrow in several respects. First, contrary to suggestions by the petitioners, neither the explicit language nor the rationale of the decision require an assessment of the psychological impact of all or even many major federal actions. The Court of Appeals addressed itself only to NEPA requirements where allegations have been made that severe adverse psychological health effects accompanied by physical symptoms have already occurred and will be exacerbated if the NRC authorizes restart of the undamaged reactor. The NRC itself has interpreted the decision to apply only where such health effects have been caused by a nuclear accident—*i.e.*, only at Three Mile Island.[46]

Second, the Court of Appeals did not require the NRC to prepare a "supplemental environmental impact statement" (EIS) estimating the psychological impact of a decision to restart the reactor at TMI. It did not even require the NRC to undertake a preliminary "environmental assessment" of the psychological effects of the proposed TMI restart. The Court required only that the NRC adopt procedures for the consideration of currently available information on the psychological health effects of a restart in order to determine whether a supplemental EIS should be prepared.

Finally, even if the NRC were to find that currently available psychological information warrants preparation of a supplemental EIS, *and* if it were to find that the restart would have a harmful effect on the psychological health of area residents, the NRC is not required by the decision below to deny the utility permission to restart the reactor. As with all agencies subject to NEPA, the NRC is required by the Act only to weigh the environmental effects of its actions—not to let

---

[46] United States Nuclear Regulatory Commission, Policy Statement: Consideration of Psychological Stress Issues, July 16, 1982.

such effects determine its action.[47] The Court of Appeals' decision in this case requires no more. Furthermore, the NRC has discretion to grant permission to restart the reactor on the condition that efforts be made to mitigate the adverse psychological health effects restart may have.

B. Existing Studies Of The TMI Population Provide Valuable Information Concerning The Psychological Health Of TMI Residents.

Existing data already collected on the TMI population and available to the NRC provide valuable information concerning psychological health there and the likelihood of further psychological harm if the reactor is restarted. Because the accident at TMI was unexpected, researchers did not have the opportunity to design studies involving baseline psychological evaluations at TMI prior to the incident. Therefore, stress evaluations of a demographically similar population living around another nuclear site were used by some researchers to establish the necessary baseline. A variety of measurement techniques and assessment devices were used to evaluate psychological health at TMI, and the findings from different studies are in substantial agreement regarding the psychological health effects of the incident there.[48] For example, the Presi-

---

[47] *Kleppe* v. *Sierra Club*, 427 U.S. 390 (1976); *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, 444 U.S. 223 (1980).

[48] A. Baum *et al.*, CHRONIC AND ACUTE STRESS ASSOCIATED WITH THREE MILE ISLAND ACCIDENT AND DECONTAMINATION, PRELIMINARY FINDINGS OF A LONGITUDINAL STUDY (Draft report submitted to USNRC, 1981); A. Baum *et al.*, PSYCHOLOGICAL STRESS FOR ALTERNATIVES OF DECONTAMINATION OF THREE MILE ISLAND-2 REACTOR BUILDING ATMOSPHERE (USNRC Report 1980); E. Bromet and L. Dunn, *Mental Health of Mothers Nine Months After the Three Mile Island Accident*, 14 URBAN AND SOCIAL CHANGE REVIEW 12 (1981); E. Bromet *et al.*, PRELIMINARY REPORT ON THE MENTAL HEALTH OF THE THREE MILE ISLAND RESIDENTS (1980); E. Bromet, H. Schulberg and L. Dunn, *Reactions of Psychiatric Patients to the Three Mile Island Nuclear Accident*, ARCHIVES OF GENERAL PSYCHIATRY (in press); E. Bromet *et al.*, THREE MILE ISLAND: MENTAL HEALTH FINDINGS (NIMH Contract #278-79-0048(SM) 1980); R.

Chisholm and S. Kasl, *The Effects of Work Site, Supervisory Status, and Job Function on Nuclear Workers' Responses to the TMI Accident*, JOURNAL OF OCCUPATIONAL BEHAVIOR (in press); R. Chisholm *et al.*, *Behavioral and Mental Health Effects of the TMI Accident on Nuclear Workers: A Preliminary Report*, 365 ANNALS OF THE NEW YORK ACADEMY OF SCIENCES 134 (1981); B. Dohrenwend *et al.*, REPORT OF THE TASK GROUP ON BEHAVIORAL EFFECTS, STAFF REPORTS TO THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THE THREE MILE ISLAND (U.S.G.P.O. 257-308, 1979); C. Flynn, THREE MILE ISLAND TELEPHONE SURVEY, PRELIMINARY REPORT ON PROCEDURES AND FINDINGS (USNRC, 1979); M. Goldhaber, P. Houts, R. DiSabella, MOBILITY OF THE POPULATION WITHIN 5 MILES OF THREE MILE ISLAND DURING THE PERIOD FROM AUGUST 1979 THROUGH JULY 1980 (Report to TMI Advisory Panel on Health Research Studies of the Pa. Dept. of Health, 1981); Governor's Office of Policy Planning, THE SOCIO-ECONOMIC IMPACTS OF THE THREE MILE ISLAND ACCIDENT: FINAL REPORT (1980); P. Houts & M. Goldhaber, *Psychological and Social Effects on the Population Surrounding TMI After the Nuclear Accident on March 28, 1979*, in ENERGY, ENVIRONMENT AND THE ECONOMY (S. Majumdar ed., 1981); P. Houts *et al.*, HEALTH-RELATED BEHAVIORAL IMPACT OF THE THREE MILE NUCLEAR INCIDENT PARTS I AND II (Report to TMI Advisory Panel on Health Research Studies of the Pa. Dept. of Health, 1980); P. Houts *et al.*, HEALTH RELATED BEHAVIORAL IMPACT OF THE THREE MILE ISLAND NUCLEAR INCIDENT PART III, (Report to TMI Advisory Panel on Health Research Studies of the Pa. Dept. of Health, 1981); P. Houts, R. DiSabella, M. Goldhaber, *Extent and Duration of Psychological Distress of Persons in the Vicinity of Three Mile Island*, 54 PROCEEDINGS OF THE PENNSYLVANIA ACADEMY OF SCIENCES 22 (1980); T. Hu *et al.*, HEALTH-RELATED ECONOMIC COSTS OF THE THREE MILE ISLAND ACCIDENT (Report submitted to TMI Advisory Panel on Health Research Studies of the Pa. Dept. of Health 1981); S. Kasl, R. Chisholm and B. Eskenazi, *The Impact of the Accident at the Three Mile Island on the Behavior and Well-Being of Nuclear Workers: Part I Perceptions and Evaluations, Behavioral Responses and Work-Related Attitudes and Feelings*, 71 AMERICAN JOURNAL OF PUBLIC HEALTH 472 (1981); S. Kasl, R. Chisholm and B. Eskenazi, *The Impact of the Accident at the Three Mile Island on the Behavior and Well-Being of Nuclear Workers: Part II. Job Tension, Psychophysiological Symptoms, and Indices of Distress*, 71 AM. J. OF PUBLIC HEALTH 484 (1981); J. Morell & G. Spivak, REVIEW OF STUDIES ON THE PSYCHOLOGICAL AND BEHAVIORAL IMPACT OF THE TMI NUCLEAR ACCIDENT, WITH SPECIFIC IMPLICATIONS FOR RESEARCH AND PLANNING (Dept. of Mental Health Sciences, Hahnemann Medical College, unpublished 1980).

dent's Commission on the Accident at Three Mile Island reported that the major health effect of the accident was upon the mental health of workers and residents of the area.[49]

Similarly, epidemiological research undertaken at TMI to determine the psychological effects of the accident reported elevated levels of anxiety and depression there. This research studied the population over time with appropriate control groups, and standardized methods for assessing psychological reactions. Three groups were selected for study—mothers of young children, workers at the TMI plant, and individuals who had used public mental health facilities in the previous six months. The study found that mothers

> "[H]ad an excess risk of experiencing clinical episodes of anxiety and depression during the year after the accident. These clinical episodes were not associated with other stress and support factors. TMI mothers also reported more symptoms of anxiety and depression at subclinical levels at both interview times compared to [the control] mothers. . . . Being pregnant at the time of the accident also was an important risk factor".[50]

Other studies of the general population around TMI also recorded elevated stress responses (*e.g.*, agitation, sleep disturbances, digestive upset) in the time period immediately following the TMI accident.[51] Although the

---

[49] The President's Commission on the Accident at Three Mile Island, THE NEED FOR CHANGE: THE LEGACY AT TMI, 35 (1979).

[50] E. Bromet, THREE MILE ISLAND: MENTAL HEALTH FINDINGS, 76 (NIMH Contract #278-79-0048, 1980). No significant effects were found for nuclear plant workers and mental health clients when compared with the control group.

[51] *E.g.*, B. Dohrenwend *et al.*, *supra*, note 48; S. Kasl, R. Chisholm & B. Eskenazi, *The Impact of the Accident at the Three Mile Island on the Behavior and Well-Being of Nuclear Workers: Part II. Job Tension, Psychophysiological Symptoms, and Indices of Distress*, 71

general prevalence of acute symptoms dissipated over time, it remained significantly detectable more than a year later.[52] Mothers of young children continued to evidence symptoms with greater severity and frequency than the general population.[53] Similarly, people living in close proximity to the reactor evidenced more symptoms. Finally, there is evidence that the affected population has a high and continuing distrust of public officials, and that belief in the dangers of nuclear power is associated with greater stress reactions.[54]

Strong confirmation of the above results was found in a later study on the effects of the venting of krypton gas at TMI.[55] People who had lived through the previous TMI incident showed significant stress in anticipation of the venting, and while the stress level decreased over time following the venting, it nevertheless remained significantly higher than that of a control group. These heightened reactions can be explained as the reactions of residents sensitized by the accident in the reactor. In addition, perceptions of nuclear threat and mistrust of public officials associated with stress reactions continued to remain high.

AM. J. OF PUBLIC HEALTH 484 (1981); P. Houts and M. Goldhaber, *Psychological and Social Effects on the Population Surrounding TMI After the Nuclear Accident on March 28, 1979*, in ENERGY, ENVIRONMENT AND THE ECONOMY (S. Majumadar ed. 1981).

[52] P. Houts & M. Goldhaber, *supra*, note 51; E. Bromet *et al.*, PRELIMINARY REPORT ON THE MENTAL HEALTH OF THE THREE MILE ISLAND RESIDENTS (1980); E. Bromet *et al.*, THREE MILE ISLAND: MENTAL HEALTH FINDINGS (NIMH Contract #278-79-0048 (SM) (1980); E. Bromet & L. Dunn, *Mental Health of Mothers Nine Months After the Three Mile Island Accident* 14 URBAN AND SOCIAL CHANGE REVIEW 12 (1981).

[53] E. Bromet & L. Dunn, *supra*, note 52.

[54] B. Dohrenwend *et al.*, *supra*, note 48; P. Houts and M. Goldhaber, *supra*, note 51.

[55] A Baum *et al.* (1981), *supra*, note 48; A. Baum *et al.* (1980), *supra*, note 48.

The Court of Appeals' decision requires the NRC, not *amicus* or parties to this action, to evaluate the significance of new psychological information relevant to the restart decision. Nevertheless, *amicus* note that existing data indicate that restart could have an adverse effect on the psychological health of the TIM population. Restart of TMI-1 will result in a change in the physical environment of Three Mile Island, i.e., the presence of a nuclear reaction and radiation which was not there before the restart. Although the radiation is assumed to be contained within the reactor building, its new presence in the environment can be perceived by residents as a threat to their physical health, because, based on their experience with the TMI-2 accident, they know it can become uncontrolled. Thus, data collected on the residents' responses to the TMI-2 accident are highly relevant to the restart of TMI-1. Residents of the area surrounding the TMI nuclear reactors experienced a near miss disaster and fear for their physical safety when the TMI-2 accident occurred. Studies show that they experienced psychological and physiological arousal as a result. Sensitization research indicates that the residents have thus been sensitized or conditioned to experience abnormally severe fear as well as the physiological and behavioral manifestations of such fear when a similar disaster is threatened or made more likely, as it would be if TMI 1 is restarted.

In addition, much has been learned in recent years about the relationship between attitudes and behaviors which would be helpful in predicting effects of TMI-1 restart based on currently held beliefs and attitudes.[56]

---

[56] I. Ajzen, & M. Fishbein, *Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research*, 84 PSYCHOLOGICAL BULLETIN 888 (1977); I. Ajzen & M. Fishbein, UNDERSTANDING ATTITUDES AND PREDICTING SOCIAL BEHAVIOR (1980); Davidson & Jaccard, *Variables That Moderate the Attitude-Behavior Relation: Results of a Longitudinal Survey*, 37 JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY 1364 (1979), Fazio and Zanna, *Direct Experi-*

Recent studies have shown that attitudes based on direct experience, like those of the TMI population, predict behaviors better than attitudes not based on direct experience. Research also indicates that anticipation of a restart could lead to significant stress reactions, especially for those living in close proximity to the reactor itself.[57]

C. Further Studies Of Psychological Health Effects At TMI Could Be Undertaken By The NRC Quickly And Inexpensively.

Although existing data on the psychological health effects of the TMI accident provide a substantial basis for estimating the effects of a decision to restart the undamaged reactor, additional data useful to predicting those effects could be gathered relatively easily by the NRC.[58] For example, the raw data collected for existing studies could be analyzed to determine whether the psychological health effects are mild for a large number of people or severe for a few, or both. Similarly, existing data could be analyzed to determine whether there are groups other than young mothers and proximate residents who run a high risk of being adversely affected. Follow-up studies could be undertaken to better determine the prevalence of chronic stress at TMI and its disabling effects. Finally, further information concerning the correlation between attitudes and beliefs about the safety of nuclear power and psychological health effects could be gathered in order to better estimate the future vulnerability and specific symptomatology of persons holding such beliefs.[59]

---

ence and Attitude-Behavior Consistency, 14 ADVANCES IN EXPERIMENTAL SOCIAL PSYCHOLOGY (L. Berkowitz, ed., 1981).

[57] A. Baum *et al.* (1981), *supra*, note 48.

[58] P. Walker, W. Fraize, J. Gordon and R. Johnson, PROCEEDINGS OF THE WORKSHOP ON PSYCHOLOGICAL STRESS ASSOCIATED WITH THE PROPOSED RESTART OF THREE MILE ISLAND UNIT 1, 47-74 (1982) (hereinafter cited as *Proceedings*).

[59] Dr. Robert R. Holt has outlined one study that could be easily done, based on the relationship between attitudes and symptoms in a sample of current TMI residents. *Proceedings* at 76.

Because much of the existing raw data would be useful and several methods for the collection of additional data have already been developed, none of these additional studies should take more than a few months to complete. CEQ regulations require the NRC to obtain information relevant to adverse impacts of its actions which are essential to reasoned choice among alternatives if the overall costs of obtaining that information are not exorbitant. 40 CFR 1502.22. In addition, further information concerning stress symptoms would be useful to the NRC when it considers what actions, if any, are needed to mitigate adverse psychological health effects at TMI.

IV. IMPAIRMENTS OF PSYCHOLOGICAL HEALTH EXPERIENCED BY RESIDENTS OF THE TMI AREA IN CONNECTION WITH THE RESTART OF TMI-1 CAN BE SIGNIFICANTLY ALLEVIATED THROUGH THE USE OF STRESS MANAGEMENT TECHNIQUES.

As noted, the Court of Appeals' decision merely requires the NRC to adopt procedures to consider information about the psychological health effects of the TMI restart, in order to determine whether a supplemental EIS is warranted. *Amicus* believes that if the NRC orders the preparation of such a statement, it could lead to efforts to alleviate the psychological distress suffered by TMI area residents. The NRC could, in its discretion, encourage the use of therapeutic techniques at TMI that have proven reliable and effective in reducing stress in other situations.[60]

Studies have demonstrated that advanced preparation for an anxiety-producing event through appropriate presentation of relevant information and structured

---

[60] *Calvert Cliffs Coord. Com. v. United States Atomic Energy Commission*, 449 F.2d 1109, 1128 (D.C. Cir. 1971); *Environmental Defense Fund* v. *Corps. of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974); and see 40 CFR §§ 1500.2(a), (e) and (f); *In Matter of Metropolitan Edison Company*, 11 NRC 297, 307-309 (1980).

coping strategies significantly reduces anticipatory anxiety, decreases stress and perceived discomfort.[61]

In addition to such information programs group therapy programs could be established at community mental health centers or at other treatment facilities. People who experience a high degree of anxiety about the TMI restart could be offered the opportunity to enroll in these groups. Therapeutic groups can use several effective techniques to assist in the management of stress, including desensitization [62] and relaxation [63] techniques.[64]

---

[61] Egnert, Battit, Welch & Bartlesa, *Reduction of Post-Operative Pain By Encouragement and Instruction of Patients*, 270 NEW ENGLAND JOURNAL OF MEDICINE 825 (1964); Langer, Janis & Wolfer, *Reduction of Psychological Stress in Surgical Patients*, 11 JOURNAL OF EXPERIMENTAL SOCIAL PSYCHOLOGY 155 (1975); B. Melamed & G. Siegel, BEHAVIORAL MEDICINE (1980). Public information and therapy programs have been used to fight cardiovascular disease, in programs such as the Stanford Heart Disease Prevention Program. Meyer, Nash, McAlister, Macoby & Farquhar, *Skills Training in Cardiovascular Health Education Campaigns*, 48 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 129 (1980); Hollis, Connor & Matarazzo, LIFESTYLE BEHAVIORAL HEALTH, AIND HEART DISEASE, BEHAVIORAL MEDICINE AND CLINICAL PSYCHOLOGY: OVERLAPPING AREAS (R. Gatchel, A. Baum, & J. Singer, eds., 1982).

[62] See J. Wolpe, THE PRACTICE OF BEHAVIOR THERAPY (1969).

[63] See E. Jacobsen, PROGRESSIVE RELAXATION (1938) for the pioneering study in this field.

[64] Behavioral and other psychological approaches have been used to treat anxiety; R. Gatchel, *Comparative Effectiveness of Group Administered Desensitization in an Education/Discussion Group Procedure in Reducing Dental Fear*, 101 JOURNAL OF THE AMERICAN DENTAL ASSOCIATION 634 (1980); J. Wolpe, THE PRACTICE OF BEHAVIOR THERAPY (1969); asthma: Creer, Asthma, 50 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 912 (1982); depression, A. Beck, COGNITIVE THERAPY AND THE EMOTIONAL DISORDERS (1976); epilepsy, Sterman and Friar, *Suppression Of Seizures In An Epileptic Following Sensorimotor EEG Feedback Training*, 33 ELECTROENCEPHOLOGY AND CLINICAL NEUROPHYSIOLOGY 89 (1972); gastrointestinal disorders, Whitehead and Bosmajian, *Behavioral Medicine Approaches To Gastrointestinal Disorders*, 50 JOURNAL OF CON-

These relaxation and stress management techniques can be provided at a relatively low cost per individual in groups with as many as fifteen or twenty individuals in each group.

Accordingly, if the NRC concludes that restart of TMI reactor will cause serious psychological health effects in the surrounding population, it has a variety of methods available for its consideration that offer the potential for significantly reducing the detrimental psychological impact of restarting the TMI reactor.

CONCLUSION

The judgment below should be affirmed.

Respectfully submitted,

MARGARET FARRELL EWING
(Counsel of Record)
GEOFFREY P. MILLER
BRUCE J. ENNIS
ENNIS, FRIEDMAN, BERSOFF
& EWING
Suite 511
1200 Seventeenth Street, N.W.
Washington, D.C. 20036
(202) 775-8100
Attorneys for Amicus Curiae
American Psychological Association

DATED: Washington, D.C.
January 28, 1983

SULTING AND CLINICAL PSYCHOLOGY 976 (1982); headaches, Blanchard and Andrasik, *Psychological Assessment and Treatment of Headache: Recent Developments and Emerging Issues*, 50 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 859 (1982); and sleep disorders, Burkovec, *Insomnia*, 50 JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY 880 (1982). See generally R. Gatchel & A. Baum, INTRODUCTION TO HEALTH PSYCHOLOGY (1983).

Nos. 81-2399 and 82-358

Office - Supreme Court, U.S.
FILED
DEC 16 1982
ALEXANDER L. STEVAS,
CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER AND LIGHT COMPANY and PENNSYLVANIA ELECTRIC COMPANY,

Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,

Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,

Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,

Respondents.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF OF ATOMIC INDUSTRIAL FORUM AS *AMICUS CURIAE* IN SUPPORT OF PETITIONERS

Michael I. Miller
Counsel of Record
PHILIP P. STEPTOE
ELENA Z. KEZELIS
ISHAM, LINCOLN & BEALE
Suite 5200
Three First National Plaza
Chicago, Illinois 60602
(312) 558-7500
Attorneys For Amicus Curiae

LINDA L. HODGE
Staff Counsel
Atomic Industrial Forum, Inc.
7101 Wisconsin Avenue
Bethesda, Maryland 20814

Pandick Press Midwest, Inc., Chicago, Illinois • 454-7600

QUESTION PRESENTED

Whether the National Environmental Policy Act requires continuing reassessment of the environmental effects of operation of a licensed nuclear power plant in the absence of any proposal for federal action.

INDEX

	PAGE
Table of Authorities	iii
Preliminary Statement	1
Interest of the Atomic Industrial Forum	2
Summary of Argument	3
Argument	5
I. THIS COURT SHOULD ADDRESS THE ISSUE WHETHER NEPA REQUIRES THE NRC TO REASSESS CONTINUALLY THE ENVIRONMENTAL IMPACTS OF LICENSED NUCLEAR POWER PLANTS	5
II. THE COURT OF APPEALS ERRED IN RULING THAT NEPA REQUIRES THE NRC TO REASSESS CONTINUALLY THE ENVIRONMENTAL IMPACTS OF LICENSED NUCLEAR POWER PLANTS	7
A. The NRC's Continuing Responsibilities Over Licensed Nuclear Power Plants do not Constitute a Proposal for Major Federal Action Within the Scope of NEPA	9
B. The Court of Appeals' Ruling That NEPA Requires Continual Environmental Reassessment Contravenes Both the Concept of Finality of Agency Action and Congressional Intent as Expressed in the Atomic Energy Act	13
III. CURRENT NEPA PROCEDURES EMPLOYED BY THE NRC FULLY SATISFY THE REQUIREMENTS OF THE ACT AND WOULD JUSTIFY APPLICATION OF NEPA TO THE TMI-1 RESTART PROCEEDING. THE COURT-CREATED OBLIGATION TO REASSESS CONTINUALLY ENVIRONMENTAL IMPACTS OF ALL LICENSED NUCLEAR POWER PLANTS WILL IMPOSE A SUBSTANTIAL BURDEN ON THE NRC AND THE INDUSTRY IT REGULATES	14
Conclusion	22

TABLE OF AUTHORITIES

	PAGE
Cases	
Aberdeen & Rockfish R. Co. v. *SCRAP*, 422 U. S. 289 (1975)	9, 10
Andrus v. *Sierra Club*, 442 U. S. 347 (1979)	10, 11, 18
Blonder-Tongue Laboratories, Inc. v. *University of Illinois Foundation*, 402 U. S. 313 (1971)	7
Burbank Anti-Noise Group v. *Goldschmidt*, 623 F. 2d 115 (9th Cir. 1980), *cert. denied*, 450 U. S. 965 (1981)	11
Commonwealth Edison Company (Dresden Nuclear Power Station, Unit No. 1), DD-80-24, 11 N. R. C. 951 (1980)	16
Cuyler v. *Sullivan*, 446 U. S. 335 (1980)	7
Defenders of Wildlife v. *Andrus*, 627 F. 2d 1238 (D. C. Cir. 1980)	11
Federal Tort Claim of General Public Utilities Corp., CLI-81-10, 12 N. R. C. 773 (1981)	9
Interstate Commerce Comm'n v. *Jersey City*, 322 U. S. 503 (1944)	19
Kleppe v. *Sierra Club*, 427 U. S. 390 (1976)	9, 10, 11, 17, 21
Natural Resources Defense Council, Inc. v. *United States Nuclear Regulatory Comm'n*, 685 F. 2d 459 (D. C. Cir. 1982), *cert. granted sub nom., Baltimore Gas & Elec. Co.* v. *Natural Resources Defense Council, Inc.*, 51 U. S. L. W. 3419 (Nov. 29, 1982) (No. 82-524)	6, 12, 20
Natural Resources Defense Council, Inc. v. *United States Nuclear Regulatory Comm'n*, 547 F. 2d 633 (D. C. Cir. 1976), *rev'd on other grounds sub. nom., Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U. S. 519 (1978)	17

PAGE

People Against Nuclear Energy v. *United States Nuclear Regulatory Comm'n*, 678 F. 2d 222 (D. C. Cir. 1982), *cert. granted sub nom., Metropolitan Edison Co.* v. *People Against Nuclear Energy*, 51 U. S. L. W. 3339 (Nov. 1, 1982) (No. 81-2399) ..... *passim*

Piper Aircraft Co. v. *Reyno*, ____ U. S. ____, 102 S. Ct. 252 (1981) 7

Power Reactor Development Corp. v. *International Union of Electrical, Radio and Machine Workers*, 367 U. S. 396 (1961) 15

Procunier v. *Navarette*, 434 U. S. 555 (1978) 7

Sierra Club v. *Andrus*, 581 F. 2d 895 (D. C. Cir. 1978), *rev'd on other grounds*, 442 U. S. 347 (1979) 12

Sholly v. *United States Nuclear Regulatory Comm'n*, 651 F. 2d 780 (D. C. Cir. 1980), *cert. granted*, 451 U. S. 1016 (May 26, 1981) 16

Strycker's Bay Neighborhood Council, Inc. v. *Karlen*, 444 U. S. 223 (1980) 21

Vance v. *Terrazas*, 444 U. S. 252 (1980) 7

Vermont Yankee Nuclear Power Corp. v. *Natural Resources Defense Council, Inc.*, 435 U. S. 519 (1978) 4, 14, 19, 20, 21

Virginia Electric Power Company (Surry Nuclear Power Station, Units 1 and 2), CLI-80-4, 11 N. R. C. 405 (1980) 16

Weinberger v. *Catholic Action of Hawaii*, 454 U. S. 139 (1981) 10

Westside Property Owners v. *Schlesinger*, 597 F. 2d 1214 (9th Cir. 1979) 11

PAGE

Statutes

Atomic Energy Act of 1954, ch. 703, 68 Stat. 919 (1954) (codified at 42 U. S. C. § 2011 *et seq.* (1976)) 3, 6, 14

National Environmental Policy Act of 1969, 42 U. S. C. § 4321 *et seq.* (1976) ..... *passim*

42 U. S. C. § 2236 (1976) 13

42 U. S. C. § 2237 (1976) 13

42 U. S. C. § 2239(a) (1976) 15, 16

42 U. S. C. § (C) (1976) 2, 10, 17

Regulations

10 C. F. R. Part 2, Appendix A (1982) 15

10 C. F. R. § 50.59 (1982) 16

10 C. F. R. § 51.5 (1982) 16

10 C. F. R. § 51.7 (1982) 16

10 C. F. R. § 51.20 (1982) 15

10 C. F. R. § 51.21 (1982) 16

10 C. F. R. §§ 51.22-51.26 (1982) 16

10 C. F. R. § 51.24 (1982) 15

10 C. F. R. § 51.25 (1982) 15

10 C. F. R. § 51.26 (1982) 15

40 C. F. R. § 1502.5 (1981) 18

40 C. F. R. § 1502.9(c)(i) (1981) 11

40 C. F. R. § 1502.9(c)(ii) (1981) 11, 18

40 C. F. R. § 1508.9 (1981) 17

40 C. F. R. § 1508.23 (1981) 12, 17

47 Fed. Reg. 12,940 *et seq.* (March 26, 1982) (Amending 10 C. F. R. §§ 51.21, 51.23(e), 51.53) 19

PAGE

Legislative History

Joint Comm. on Atomic Energy, 83d Cong., 2d Sess., *A Proposed Act to Amend the Atomic Energy Act of 1946* 21 (Comm. Print April 1954), *reprinted in* 1 U. S. A. E. C., *Legislative History of the Atomic Energy Act of 1954*, at 81 (1955) 13

S. 3323 and H. R. 8862 to Amend the Atomic Energy Act of 1946: Hearings Before the Joint Committee on Atomic Energy, 83d Cong., 2d Sess, 230-31 (1954) (Statement of E. H. Dixon), *reprinted in* 2 U. S. A. E. C. *Legislative History of the Atomic Energy Act of 1954*, at 1864-65 (1955). 13

Joint Comm. on Atomic Energy, 83d Cong., 2d Sess., *Draft in Bill Form* 41 (Comm. Print May 21, 1954), *reprinted in* 1 U. S. A. E. C., *Legislative History of the Atomic Energy Act of 1954*, at 297 (1955) 14

Miscellaneous

Letter from Nunzio J. Palladino, Chairman, NRC, to the Honorable Tom Bevill, Chairman, Subcommittee on Appropriations, House Committee on Appropriations (September 30, 1982) (enclosing monthly status reports as required by House Report 96-1093). 3

USNRC, Regulatory Guide 4.2, Preparation of Environmental Reports for Nuclear Power Stations (Rev. 2 1976) 15

USNRC, NUREG 0555, Environmental Standard Review Plans For the Environmental Review of Construction Permit Applications For Nuclear Power Plants (May 1979) 15

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER AND LIGHT COMPANY and PENNSYLVANIA ELECTRIC COMPANY,

Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,

Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the UNITED STATES OF AMERICA,

Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,

Respondents.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF OF ATOMIC INDUSTRIAL FORUM AS *AMICUS CURIAE* IN SUPPORT OF PETITIONERS

PRELIMINARY STATEMENT

On November 1, 1982 this Court granted the motion of the Atomic Industrial Forum ("Forum") for leave to file an *amicus curiae* brief supporting the petitions for writs of certiorari in this case. The Forum now respectfully submits its *amicus curiae* brief on the merits. The Forum has obtained the consent of all parties in this litigation to the filing of this brief, as reflected in their letters filed in this Court.

INTEREST OF THE ATOMIC INDUSTRIAL FORUM

The Forum is an association of about 550 domestic and overseas organizations involved in the peaceful uses of nuclear energy. The membership includes electric utilities, manufacturers, architect/engineer/construction firms, service organizations, consultants, uranium producers, radionuclide and radiopharmaceutical suppliers, financial institutions, universities, labor unions, government agencies and research laboratories. One hundred and five of the Forum's 122 domestic electric operating utility members rely on, or plan to rely on, nuclear power generation for at least a portion of their power needs.

The opinion below severely prejudices the interests of Forum members because of its conclusion that the operation of nuclear power plants by those members currently holding Nuclear Regulatory Commission ("NRC") operating licenses constitutes proposed federal action subject to continuing reassessment under the National Environmental Policy Act, 42 U. S. C. § 4332(C) (1976) ("NEPA"). This ruling robs the NRC licensing process, on which the Forum's members have relied by investing billions of dollars, of any finality. It implies that operating licenses, issued for terms of up to forty years after exhaustive administrative review, may be terminated at any time upon a finding by the NRC or a reviewing court that the NEPA cost/benefit balance no longer favors continued operation or that there are environmentally preferable alternatives. Moreover, it is likely to divert NRC and industry resources from reviewing the safety and environmental impacts of new nuclear power plants to reassessing the environmental impacts of currently operating plants. The ruling is also detrimental to those Forum members with nuclear power plants under construction, who thereby have a vital interest in the timely completion of the NRC licensing process.[1]

---

[1] Current NRC estimates are that nine reactors presently under construction will be ready to receive operating licenses in 1982, and 15

Footnote continued on following page.

Finally, the interests of the Forum in this case are congruent with the national interest. Both Congress and the Executive Branch have determined that generation of electricity through nuclear power is important to national well-being and security, in that reliance on dwindling domestic sources and undependable foreign sources of oil and gas is thereby reduced. The decision below is inimical to national policy in that the court created needless and legally unsupportable obstacles to the continued commercial development of nuclear power.

SUMMARY OF ARGUMENT

The court of appeals held that routine day-to-day operation of licensed nuclear power plants within the terms of licenses previously issued by the NRC imposes on that agency a continuing obligation to reassess the plants under NEPA. This sweeping ruling went far beyond what was necessary to establish the applicability of NEPA to the specific facts of the TMI-1 restart proceeding. Even though petitioners did not tender this issue for review, the Court should nevertheless reach it because it is a predicate to intelligent resolution of the psychological distress issue. Contrary to the lower court's decision, routine operation of a licensed plant does not constitute a proposal for major federal action within the purview of NEPA; instead, a utility's operation of its plant is continuing private action. Neither the Act, nor this Court's interpretations of it, nor existing regulations support the lower court's sweeping ruling.

Moreover, the majority's decision is in direct conflict with Congressional intent. By enacting the Atomic Energy Act of 1954, 42 U. S. C. § 2011 *et seq.* (1976) ("AEA"), Congress

---

Footnote continued from preceding page.

more will receive operating licenses in 1983. See Letter from Nunzio J. Palladino, Chairman, NRC, to the Honorable Tom Bevill, Chairman, Subcommittee on Appropriations, House Committee on Appropriations (September 30, 1982) (enclosing monthly status reports as required by House Report 96-1093).

intended to encourage the peaceful development of commercial nuclear power, in part by providing for the issuance of commercial operating licenses for periods of up to 40 years. By holding that the operation of nuclear power plants by private licensees is subject to continuous federal environmental cost/benefit balancing, the lower court destroyed the finality of the NRC licensing process, and undermined this Congressionally created incentive to the commercial development of nuclear power. This judicial modification of the statutory scheme adopted by Congress is contrary to this Court's instructions in *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U. S. 519, 557-58 (1978).

Before the decision of the court of appeals, only the NRC's licensing decisions in issuing construction permits, operating licenses for nuclear power plants, and amendments to such permits and licenses constituted proposed federal actions requiring environmental review in conformity with NEPA. That certainty in the NRC licensing and NEPA process has been seriously undermined by the decision below, which sweepingly imposes a continuing obligation to continually reassess all previously licensed nuclear power plants. This broad ruling was unnecessary to find that NEPA applies to the specific facts of the TMI-1 restart proceeding. If allowed to stand, the ruling is likely to inflict on utilities, the NRC, and federal courts the substantial burden of preparing and reviewing endless, redundant environmental documents re-justifying licensing decisions which have already been made. NRC and industry resources should instead be used to study and improve the safety of operating plants, and to assess the safety and environmental impacts of proposed plants.

I.

THIS COURT SHOULD ADDRESS THE ISSUE WHETHER NEPA REQUIRES THE NRC TO REASSESS CONTINUALLY THE ENVIRONMENTAL IMPACTS OF LICENSED NUCLEAR POWER PLANTS.

The Forum supports the position of Petitioners United States Nuclear Regulatory Commission and United States of America in No. 82-358 ("the Government"), and Petitioners Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company in No. 81-2399 ("Private Petitioners"), that psychological distress allegedly induced in persons living near nuclear power plants is not an environmental impact cognizable under the National Environmental Policy Act, 42 U. S. C. § 4321 *et seq.*, (1976) ("NEPA"). However, this brief does not repeat arguments already presented by the petitioners. Instead, it addresses another important issue raised by the decision below.

The court of appeals held that NEPA imposes on the Nuclear Regulatory Commission ("NRC") a continuing obligation to reassess the environmental impact of day-to-day operation of licensed nuclear power plants. Private Petitioners apparently chose to concentrate on the psychological distress issue instead because its resolution will dispose of the immediate impediment preventing restart of the undamaged reactor at Three Mile Island Unit 1 ("TMI-1"). The Government also chose to not tender the NEPA issue for review; it suggested that the ruling was dictum, and that the decision could rest on the narrower ground that restart of TMI-1 constitutes a proposal for major federal action, rather than on the sweeping proposition that all licensed nuclear reactors are subject to continuing reassessment under NEPA. Petition of the United States Nuclear Regulatory Commission and United States for Writ of Certiorari at 17 n. 12.

However, the Government's position before the Court regarding the continuing obligation aspect of the decision below has been inconsistent. In a brief filed recently with this Court in *Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, 685 F. 2d 459 (D. C. Cir. 1982), *cert. granted sub nom., Baltimore Gas & Elec. Co.* v. *Natural Resources Defense Council, Inc.*, 51 U. S. L. W. 3419 (Nov. 29, 1982) (No. 82-524), Petition of the United States and United States Nuclear Regulatory Commission for Writ of Certiorari at 21, the Government asserted that the court of appeals held in this case that "NEPA imposes on the NRC a continuing obligation to reassess the environmental impacts of a licensing decision. . ." It argued that this continuing obligation might cause the S-3 decision to affect adversely already licensed reactors. The apparently contradictory positions set forth by the Government in petitions to this Court confirm the Forum's view that the continuing NEPA obligation ruling is too important to be left in "legal limbo." Brief of Atomic Industrial Forum in Support of Petitions for Writs of Certiorari at 6 n. 3. The uncertainty engendered by this aspect of the decision is manifest; this Court should address both holdings of the court of appeals.

The fact that petitioners chose not to tender the NEPA issue for review should not prevent the Court from resolving this question. Respondent had argued below that psychological distress was cognizable either under the Atomic Energy Act of 1954, 72 U. S. C. § 2011 *et seq.* (1976) ["AEA"], or in the alternative, under NEPA. Judges Wilkey and McGowan properly rejected the argument that the AEA applied; Judges McGowan and Wright concluded that NEPA does require consideration of psychological distress. The NEPA majority relied on its interpretation of the NRC's responsibilities under NEPA as the statutory foundation on which to erect an obligation to consider psychological distress. Accordingly, resolution of the continuing NEPA obligation issue is "a

predicate to intelligent resolution" of the question whether psychological distress is thus cognizable under NEPA, and it is properly before the Court for decision. *Cuyler* v. *Sullivan,* 446 U. S. 335, 342 n. 6 (1980); *Vance* v. *Terrazas,* 444 U. S. 252, 259 n. 5 (1980). In any event, this Court's power to decide a case is not limited by the precise terms of the question presented. *Blonder-Tongue Laboratories, Inc.* v. *University of Illinois Foundation,* 402 U. S. 313, 320 n. 6 (1971). *See also Piper Aircraft Co.* v. *Reyno,* ____ U. S. ____, 102 S. Ct. 252, 261 n. 12 (1981); *Procunier* v. *Naverette,* 434 U. S. 555, 559 n. 5 (1978).

There is no doubt that this Court should also address the psychological distress issue raised by petitioners. Nevertheless, the lower court's ruling that the NRC must continually reassess the environmental impact of all nuclear power plants cannot be permitted to stand uncorrected. The Forum believes that this brief will assist the Court in considering this important aspect of the decision below which might otherwise escape review.

II.

THE COURT OF APPEALS ERRED IN RULING THAT NEPA REQUIRES THE NRC TO REASSESS CONTINUALLY THE ENVIRONMENTAL IMPACTS OF LICENSED NUCLEAR POWER PLANTS.

Analysis of the court of appeals' rationale supporting its creation of a continuing obligation to comply with NEPA establishes that the court impermissibly ignored the plain language of NEPA, this Court's interpretations of the Act, and regulations promulgated by the Council on Environmental Quality ("CEQ"). Specifically, the lower court determined that the March 1979 accident at TMI-2 may have resulted in significant new circumstances regarding the environmental effects of operating TMI-1 because the accident allegedly caused psychological distress in residents near the area, and held that the NRC must consider that distress as an environmental

impact before making a decision on the restart of TMI-1. The court's rationale was that the NRC's continuing supervisory responsibilities over TMI-1 and other licensed nuclear power plants constitutes federal action within the scope of NEPA, and that the NRC therefore has a continuing obligation to reassess environmental effects under NEPA. *People Against Nuclear Energy* v. *United States Nuclear Regulatory Comm'n*, 678 F. 2d at 231. The court analogized the NRC's regulatory responsibilities regarding TMI-1 and other licensed reactors to "a more or less continuing agency decision to sustain an ongoing program that the agency has discretion to terminate at any time." *Id.* at 232. Contrary to the manner in which the Government has characterized the ruling in the instant case, the lower court did not confine itself to the proposed restart of TMI-1. Instead, the court sweepingly imposed a continuing obligation on the NRC to apply NEPA to the day-to-day operation of all licensed nuclear power plants, and refused to limit that obligation to "the happenstance that TMI-1 was shut down for refueling at the time of the [TMI-2 March 1979] accident." *Id.* at 231.[2] The court ordered that the case be remanded to the NRC for a determination by that agency of what procedures NEPA requires in light of the psychological health effects of continued operation of TMI-1, and specifically, whether a supplemental environmental impact statement ("EIS") should be prepared. *Id.* at 231 n. 12, 233-34.

---

[2] As Judge Wilkey noted:

> [T]he majority suggests that any time a court decides merely that a supplemental EIS *may* be needed, it necessarily must order that the nuclear plant, or other federal activity, be shut down until the agency has considered the environmental issues. NEPA was not intended to result in such a major interference in already approved and already operating facilities.

People Against Nuclear Energy v. *United States Nuclear Regulatory Comm'n*, 678 F. 2d at 248 (Wilkey, J., dissenting) (emphasis in original). Moreover, on January 7, 1982, the majority enjoined restart of TMI-1 until the NRC had completed an environmental assessment, even though restart decisions are normally quite routine.

Footnote continued on following page

A.

The NRC's Continuing Responsibilities Over Licensed Nuclear Power Plants Do Not Constitute a Proposal for Major Federal Action Within the Scope of NEPA

The lower court's determination that NEPA requires continual reassessment of the environmental effects of day-to-day operation of licensed nuclear power plants was predicated solely on the fact that the NRC has continuing supervisory responsibilities over the operation and maintenance of such facilities. Although the NRC's supervisory responsibilities are extensive, they nevertheless cannot, standing alone, trigger NEPA. As explained in *Kleppe* v. *Sierra Club*, 427 U. S. 390, 419 n. 1 (1976) (Marshall, J., concurring), when a federal agency is initiating its own proposal, NEPA is more demanding. However, when private action is to be approved, NEPA only seeks to assure that the agency considers environmental impacts during the formulation of a position on the proposal submitted by private parties. *See also Aberdeen & Rockfish R. Co.* v. *SCRAP*, 422 U. S. 289, 320 (1975). This distinction establishes that federally authorized private action and private action are not synonymous for NEPA purposes. As explained in *Federal Tort Claim of General Public Utilities Corp.*, CL1-81-10, 12 N. R. C. 773 (1981), the regulatory framework established by the AEA imposes distinctly different sets of responsibilities on the NRC and the industry regulated by that agency. Licensees bear the primary responsibility for constructing and

---

Footnote continued from preceding page.

That injunction was subsequently lifted, but only because of independent problems delaying reopening of the plant. Indeed, the majority's opinion suggests that it would have felt equally compelled to order a *shut down* of TMI-1, pending the determination of whether to prepare a supplemental EIS, had the plant been in operation at the time of the TMI-2 accident. *Id.* at 246-47. Apparently, the court found the fact that TMI-1 was shut down for refueling to be entirely irrelevant to its determination to impose a continuing obligation to reassess environmental impacts.

operating their nuclear facilities safely. In contrast, the NRC is responsible for prescribing minimum health and safety licensing standards for nuclear facilities, and for inspecting licensees' operations in light of these standards. The NRC's function is to ensure, through its licensing and inspection responsibilities, that licensees meet the agency's standards. Thus, when the NRC supervises the operation of licensed plants, it does no more than oversee and regulate continuing private activity.

Moreover, it is a well-established rule that NEPA is triggered only if there is a proposal for action. *Aberdeen & Rockfish R. Co.* v. *SCRAP*, 422 U. S. 289, 320 (1975). NRC action on a utility's application for a construction permit or operating license involves a proposal for major federal action. But a utility's operation of a licensed facility within the terms of its license is nothing more than continuing private activity. No new proposal for federal action is involved in such operation. Both the NRC and the licensee are merely carrying out the activities which were contemplated at the time the operating license was issued.

Even though the NRC's supervisory responsibilities are extensive, they nevertheless cannot create a continuing obligation on the part of the NRC to continually reassess licensed facilities in accordance with NEPA. Section 102(2)(C) of NEPA, 42 U. S. C. § 4332(C), directs federal agencies to prepare an EIS "in every recommendation or report on *proposals for . . . major Federal actions . . .*" (emphasis supplied) NEPA speaks solely in terms of proposed actions, and this Court has stressed the fact on numerous occasions. *Weinberger* v. *Catholic Action of Hawaii*, 454 U. S. 139, 142, 146 (1981); *Andrus* v. *Sierra Club*, 442 U. S. 347, 361-62 (1979); *Kleppe* v. *Sierra Club*, 427 U. S. 390, 399-406 (1976); *Aberdeen & Rockfish R. Co.* v. *SCRAP*, 422 U. S. 289, 320 (1975). A "proposal" is more than mere contemplation of possible action. *Kleppe* v. *Sierra Club*, 427 U. S. at 404. NEPA is triggered during the planning stage of agency action so as to require

environmental review only if "an agency's planning ripens into a 'recommendation or report on proposals for ... major Federal actions ...'" *Andrus* v. *Sierra Club,* 442 U. S. at 350 and n. 2. The Court's own examples of proposals for major federal action include agency decisions whether to issue a lease, approve a mining plan, issue a right-of-way, or take other action to allow private activity. *Kleppe* v. *Sierra Club,* 427 U. S. at 399. In the absence of such a proposal for major federal action, there is nothing to analyze under NEPA. *Id.* at 401.[3]

The lower court's decision also disregards regulations promulgated by the CEQ, whose interpretations are entitled to substantial deference. *Andrus* v. *Sierra Club,* 442 U. S. at 358. The lower court, while recognizing that the NRC has discretion to choose its procedures for complying with NEPA, remanded with the instruction that the NRC determine whether a supplemental EIS should be prepared. *People Against Nuclear Energy* v. *United States Nuclear Regulatory Comm'n,* 678 F. 2d at 226. CEQ regulations regarding supplemental EIS's provide that one should be prepared if: "(i) The agency makes substantial changes in the *proposed* action that are relevant to environmental concerns; or (ii) there are significant new circumstances or information relevant to environmental concerns and bearing on the *proposed* action or its impacts." 40 C. F. R. § 1502.9(c)(1)(i) and (ii) (1981). (emphasis supplied). The

[3] Notably, other courts presented with similar issues have concluded correctly that an EIS analyzing mere continuing operation of a facility is not required. *See, e.g., Burbank Anti-Noise Group* v. *Goldschmidt,* 623 F. 2d 115 (9th Cir. 1980), *cert. denied,* 450 U. S. 965 (1981) (EIS not necessary before existing airport could be purchased with federal financial assistance); *Westside Property Owners* v. *Schlesigner,* 597 F. 2d 1214 (9th Cir. 1979) (EIS not necessary for formalization of German pilot training program). *See also Defenders of Wildlife* v. *Andrus,* 627 F. 2d 1238, 1244 (D. C. Cir. 1980) (EIS not necessary when an agency does nothing more than fail to prevent a party's action from occurring).

requirement that there be a proposal is thus retained in the regulations. CEQ defines it as follows: " 'Proposal' exists at the stage in the development of an action when an agency subject to the Act has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing that goal and the effects can be meaningfully evaluated." 40 C. F. R. § 1508.23 (1981). A utility's routine operation of a nuclear power plant within the terms of its license is ongoing private action; it does not come within CEQ's definition of a proposal.[4] Nor are the NRC's continuing supervisory responsibilities over the day-to-day operations of such a plant within the scope of CEQ's definition: supervision does not require the NRC to be actively preparing any decision with respect to plant operation.

> In another context, the court of appeals has admitted that:
>
> [W]e cannot allow NEPA to be bloated, and indeed enfeebled, by pushing the logic of Section 102(2)(C) to ridiculous extremes. NEPA does not require an annual EIS on routine operation and maintenance of every program with significant environmental ramifications. Its rule of reason does not demand rethinking of everything all the time.

Sierra Club v. *Andrus*, 581 F. 2d 895, 906 (D. C. Cir. 1978), *rev'd on other grounds*, 442 U. S. 347 (1979). However, the court of appeals apparently believes there is no such thing as "too hard a look" where nuclear power is concerned.[5]

---

[4] For reasons stated below, the TMI-1 restart proceeding probably would fit within the definition of a "proposal for major federal action." *See* p. 17, *infra*.

[5] *Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, 685 F. 2d 459, 517 (D. C. Cir. 1982) (Wilkey, J., dissenting), *cert. granted sub nom., Baltimore Gas & Electric Co.* v. *Natural Resources Defense Council, Inc.*, 51 U. S. L. W. 3419 (Nov. 29, 1982) (No. 82-524). Judge Wilkey added: "If there was ever a doubt prior to today, it is now clear that this court is committed to an assumed role as high public protector of all that is good from perceived evils of the nuclear age." *Id.*

B.

The Court of Appeals' Ruling That NEPA Requires Continual Environmental Reassessment Contravenes Both the Concept of Finality of Agency Action and Congressional Intent as Expressed in the Atomic Energy Act

The consequence of the court of appeals' decision is to make operating licenses, which Congress intended to be effective for periods of up to forty years, terminable at will based on continual federal environmental cost/benefit balancing. Although operating licenses may, of course, be modified, suspended or revoked at anytime for *safety* reasons, in accordance with 42 U. S. C. §§ 2236, 2237 (1976), nothing in the AEA or NEPA suggests that forty-year operating licenses may be modified, suspended or revoked based on continuing federal environmental cost/benefit balancing. The forty-year operating license period was chosen as an incentive to encourage utilities to build nuclear power plants.[6] Nothing in the court of

---

[6] The first proposal in April, 1954 to amend the Atomic Energy Act of 1946 provided for a 25 year limitation on operating licenses. Joint Comm. on Atomic Energy, 83d Cong., 2d Sess., *A Proposed Act to Amend the Atomic Energy Act of 1946* 21 (Comm. Print April 1954), *reprinted in* 1 U. S. A. E. C., Legislative History of the Atomic Energy Act of 1954, at 81 (1955). However, in hearings held before the Joint Committee on Atomic Energy in May, 1954, a representative of interested public utilities testified that the need to finance and amortize nuclear facilities over a 25 year period would place an undue price burden on nuclear generated electricity in relation to electricity generated with conventional fuels. He encouraged Congress either to extend the operating license period to 40 years (the normal amortization period in the electric utility industry) or add a statutory provision which would allow utilities to "count absolutely" on renewal of their operating licenses after 25 years. *S. 3323 and H. R. 8862 to Amend the Atomic Energy Act of 1846: Hearings Before the Joint Committee on Atomic Energy*, 83d *Cong.*, 2d Sess., 230-31 (1954) (Statement of E. H. Dixon), *reprinted in* 2 U. S. A. E. C., *Legislative History of the Atomic Energy Act of 1954*, at 1864-1865 (1955). Apparently in response to this testimony, the Joint Committee amended the pro-

Footnote continued on following page.

appeals' decision justifies destroying the finality contemplated by the AEA. The decision instead disrupts the orderly and workable procedures contemplated by Congress. Rather than requiring a "hard look", the court of appeals' decision apparently now compels the NRC to never stop looking, at the expense of the concept of finality of agency action.

III.

CURRENT NEPA PROCEDURES EMPLOYED BY THE NRC FULLY SATISFY THE REQUIREMENTS OF THE ACT, AND WOULD JUSTIFY APPLICATION OF NEPA TO THE TMI-1 RESTART PROCEEDING. THE COURT-CREATED OBLIGATION TO REASSESS CONTINUALLY ENVIRONMENTAL IMPACTS OF ALL NUCLEAR POWER PLANTS WILL IMPOSE A SUBSTANTIAL BURDEN ON THE NRC AND THE INDUSTRY IT REGULATES.

The procedures currently employed by the NRC to satisfy NEPA requirements assure a rigorous and exhaustive environmental review prior to operation of nuclear power plants. *See generally Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U. S. 519, 526-27 (1978). In order to obtain a construction permit for a proposed nuclear power plant, an applicant must file an environmental report which surveys and evaluates a wide variety of environmental costs and benefits over the plant's forty-year life, together with a discussion of possible alternatives to the plant.

Footnote continued from preceding page.

posed bill to extend the maximum operating license period to 40 years. Joint Comm. on Atomic Energy, 83d Cong., 2d Sess., *Draft in Bill Form* 41 (Comm. Print May 21, 1954) reprinted in 1 U. S. A. E. C., *Legislative History of the Atomic Energy Act of 1954*, at 297 (1955). The latter proposal became law on February 17, 1954. Atomic Energy Act of 1954, ch. 703, 68 Stat. 919 (1954).

10 C. F. R. § 51.20 (1982).[7] Based on these submissions and its own independent evaluations, the NRC staff then prepares a draft environmental statement which is distributed to other federal, state and local agencies and to the public for comment, after which a final EIS is prepared and distributed. 10 C. F. R. §§ 51.24, 51.25, 51.26 (1982). A mandatory public adjudicatory hearing is then held, in which the draft and final EIS's and any comments thereon are considered, together with the application and the NRC staff's safety evaluation. 42 U. S. C. § 2239(a)(1976). Interested persons are entitled to intervene and litigate virtually any aspect of the safety or environmental impact of the proposed facility. *See generally* 10 C. F. R. Part 2, Appendix A (1982). If a construction permit is awarded, the utility then proceeds to build the plant at its own risk. *Power Reactor Development Corp.* v. *International Union of Electrical, Radio and Machine Workers*, 367 U. S. 396 (1961). A utility's financial commitment at this stage easily approaches several billion dollars.

A similar safety and environmental review process is again required once the utility applies for a license to operate the plant it has constructed. Another environmental report is required, draft and final EIS's must again be prepared and

[7] According to USNRC, Regulatory Guide 4.2, Preparation of Environmental Reports for Nuclear Power Stations (Rev. 2, 1976), an applicant's environmental report must address the purpose of the proposed facility and associated transmission facilities, the site and environmental interfaces (including geography, demography, ecology, meterology, hydrology, geology, regional historic archaelogical, architectural, scenic, cultural and natural features, and noise) the effects of station construction and operation (including radiological and non-radiological effluents), effluent monitoring, environmental effects of accidents, socio-economic impacts, alternative energy sources and sites, station design alternatives, and a cost/benefit analysis. This guidance is substantially amplified by USNRC, NUREG 0555, Environmental Standard Review Plans for the Environmental Review of Construction Permit Applications for Nuclear Power Plants (May 1979). The Environmental Reports so produced are exhaustive multi-volume treatises.

circulated, and public adjudicatory hearings are again held upon request of any interested person potentially affected by proposed operation of the plant. 42 U. S. C. § 2239(a) (1976); 10 C. F. R. §§ 51.21, 51.22-51.26 (1982). Even after a forty-year operating license has been issued, if a licensee proposes any changes to the facility which require license amendments,[8] the NRC will at least prepare an environmental assessment and may prepare an EIS, if the license amendment is likely to have a significant impact on the human environment or if, as a matter of discretion, it so chooses.[9] Once again, public adjudicatory hearings regarding safety and environmental impacts of the proposed action are held at the request of any interested person.[10]

These exhaustive procedures require the NRC to evaluate environmental impacts whenever major federal action regarding a nuclear power plant is proposed: either issuance of a construction permit, issuance of an operating license, or amendment of a previously issued license or permit. Each stage of NRC involvement is a readily identifiable, discrete proposed

---

[8] Licensees can make some changes at nuclear power plants without prior NRC safety and environmental review, but only if such changes do not involve "unreviewed safety questions." *See* 10 C. F. R. § 50.59 (1982).

[9] *See* 10 C. F. R. §§ 51.5, 51.7 (1982); *Virginia Electric Power Company* (Surry Nuclear Power Station, Units 1 and 2), CLI-80-4, 11 N. R. C. 405 (1980) (preparation of an environmental impact statement on licensee's proposal to repair steam generators); *Commonwealth Edison Company* (Dresden Nuclear Power Station, Unit No. 1), DD-80-24, 11 N. R. C. 951 (1980) (discretionary preparation of environmental impact statement for proposed chemical cleaning).

[10] Whenever a proposed license amendment involves a significant hazard consideration, a hearing, if requested, must be held prior to issuance of the amendment. 42 U. S. C. § 2239(a) (1976). The Court of Appeals for the District of Columbia Circuit has held that a prior hearing must be held, if requested, even in cases which the NRC has determined do not involve "significant hazards considerations." *Sholly* v. *United States Nuclear Regulatory Comm'n*, 651 F. 2d 780 (D. C. Cir. 1980), *cert. granted*, 451 U. S. 1016 (May 26, 1981).

federal action; accordingly, each stage may, without hesitation, be described as a proposal for major federal action within the terms of NEPA, for which an environmental assessment, or where there are significant impacts, an EIS is properly required. Section 102(2)(C), 42 U. S. C. § 4332(C); *Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, 547 F. 2d 633, 638 (D. C. Cir. 1976), *rev'd on other grounds sub. nom. Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U. S. 519 (1978).

In the case of TMI-1, the final EIS reviewing TMI-1's proposed license to operate was issued in December, 1972. Moreover, the proposed restart of TMI-1 easily comes within CEQ guidelines and this Court's interpretations of NEPA as a proposal for major federal action. The NRC has been actively preparing to make a decision whether to allow restart. 40 C. F. R. § 1508.23 (1981); *Kleppe* v. *Sierra Club*, 427 U. S. at 404.[11] Under the circumstances, it was unnecessary for the court of appeals to create new law, holding on what Judge Wilkey in dissent termed the "broadest conceivable" ground, that NEPA requires continual reassessment of environmental impacts of *all* licensed nuclear power plants.[12]

At the very least, the effect of the court's expansive interpretation of the NRC's continuing NEPA responsibilities will be to divert NRC and industry resources now used to

---

[11] During the restart proceeding, several parties argued that an EIS should be prepared before a decision could be made. The NRC staff disagreed but nevertheless prepared an environmental impact appraisal, concluded that no significant impacts would result if TMI-1 was to resume operations, and recommended the issuance of a negative declaration. *Environmental Impact Appraisal by the Division of Engineering Evaluating the Proposed Restart of Three Mile Island Nuclear Station, Unit 1* (March 27, 1981) Joint App. at 48. *See* 40 C. F. R. § 1508.9 (1981).

[12] *People Against Nuclear Energy* v. *United States Regulatory Comm'n*, 678 F. 2d at 244 (Wilkey, J., dissenting).

assure the safety of licensed, operating nuclear plants and to conduct safety and environmental reviews of new nuclear plants, so that redundant environmental documents for plants already licensed after thorough environmental scrutiny may be prepared. This Court has previously recognized the problem of redundancy. In *Andrus* v. *Sierra Club,* 442 U. S. at 362, after concluding that appropriations requests merely fund actions already proposed, and accordingly, do not trigger NEPA, the Court noted: "Section 102(2)(C) is thus best interpreted as applying to those recommendations or reports that actually propose programmatic actions . . . *Any other result would create unnecessary redundancy* . . . [otherwise] the resulting EIS's would merely recapitulate the EIS's that should have accompanied the initial proposals of the programs." (emphasis supplied) *See also* 40 C. F. R. § 1502.5 (1981) (EIS's are not intended to rationalize or justify decisions already made). The most likely result of the court of appeals' decision will be to require the endless preparation of supplemental environmental impact statements, whenever it is determined that there are significant new circumstances or information relevant to environmental concerns and bearing on the operation of a licensed, operating facility. 40 C. F. R. § 1502.9(c)(ii). As dissenting Judge Wilkey pointed out, under the CEQ regulations:

> Preparation of an EIS or a supplemental EIS is required only for proposed *actions.* Yet under the majority's interpretation, the NRC is engaged in such "action" every second of every day. It thus will be possible for NEPA to apply even when a nuclear plant is operating pursuant to an NRC license and the NRC proposes to take no action to upset this status quo.

People Against Nuclear Energy v. *United States Nuclear Regulatory Comm'n,* 678 F. 2d at 244 (Wilkey, J., dissenting) (emphasis in original).

In a footnote, the court of appeals opines that if no "substantial changes" occur and no "significant new circumstances or information relevant to environmental concerns" arise, the court of appeals' ruling will not significantly increase the NEPA burden on regulatory agencies in the future. *Id.* at 233 n. 16. However, new circumstances and information *always* arise following issuance of any operating license which could make the EIS prepared at the operating license stage subject to supplementation.[13] For example, the relative costs and benefits of nuclear generation typically set out in an NRC-prepared final environmental statement depend on comparisons of fuel costs and projections of electricity demand which continually change. The alternatives against which continued operation could be evaluated under NEPA also change with time. *See Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U. S. 519, 551-53 (1978).[14] The

[13] Indeed, as this Court has pointed out in a similar context:

"Administrative consideration of evidence . . . always creates a gap between the time the record is closed and the time the administrative decision is promulgated [and, we might add, the time the decision is judicially reviewed]. . . . If upon the coming down of the order litigants might demand rehearings as a matter of law because some new circumstances has arisen, some new trend has been observed, or some new fact discovered, there would be little hope that the administrative process could ever be consummated in an order that would not be subject to reopening." *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U. S. 519, 554-55 (1978) (*quoting Interstate Commerce Comm'n* v. *Jersey City*, 322 U. S. 503, 514 (1944)).

[14] Effective April 26, 1982, the NRC has adopted rules excluding consideration of need for power and alternative energy source issues in operating license proceedings. *See* 47 Fed. Reg. 12,940 *et. seq.* (March 26, 1982) (amending 10 C. F. R. §§ 55.21, 51.23(e), 51.53). The NRC stated that these issues are considered thoroughly at the construction permit stage and experience has shown that repeated consideration at the operating license stage is unlikely to tip the NEPA cost/benefit analysis against issuance of an operating license for a plant which has already been completed. *Id.* This reasoning

Footnote continued on following page.

study of nuclear power in this country and around the world annually creates volumes of new environmental and safety information, widely disseminated to the scientific community and the public; some of it may be regarded as altering the cost/benefit balance struck by the NRC when a construction permit or operating license was issued. And, of course, whenever a court fashions novel environmental impacts, such as "psychological distress" or "uncertainties",[15] supplemental EIS's may be required for every reactor already licensed.

The obligation now imposed on the NRC and potentially on all other federal agencies is unreasonably burdensome. Neither NEPA, nor this Court's precedent interpreting it, nor the relevant regulations, nor public policy behind them or the Act impose the substantial burden of a continuing obligation to re-evaluate ongoing, licensed facilities operated by private parties subject to federal oversight. The ruling conflicts with both Congressional intent and this Court's earlier interpretations of what NEPA requires of federal agencies. As noted in *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U. S. 519, 558 (1978): "NEPA does set forth significant substantive goals for the Nation, *but its*

Footnote continued from preceding page.

would also apply to preclude reconsideration of these issues in supplemental environmental impact statements. However, it is unknown whether this new rule will survive a "hard look" by the Court of Appeals for the District of Columbia Circuit. *See People Against Nuclear Energy* v. *United States Nuclear Regulatory Comm'n*, 678 F. 2d at 234 n. 20; *see also Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, 685 F. 2d 459, 546 (D. C. Cir. 1982) (Statement of Senior Circuit Judge Bazelon as to why he voted to deny rehearing), *cert. granted sub nom., Baltimore Gas & Electric Co.* v. *Natural Resources Defense Council, Inc.*, 51 U. S. L. W. 3419 (Nov. 29, 1982) (No. 82-524).

[15] *See Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, 685 F. 2d 459 (D. C. Cir. 1982), *cert. granted sub nom., Baltimore Gas & Electric Co.* v. *Natural Resources Defense Council, Inc.*, 51 U. S. L. W. 3419 (Nov. 29, 1982) (No. 82-524).

mandate to the agencies is essentially procedural." (emphasis supplied) Courts may not impose additional procedural requirements not stated in the plain language of the Act. *Id.* at 548; *Kleppe* v. *Sierra Club*, 427 U. S. 390, 405-406 (1976). Nothing in NEPA supports the proposition that Congress intended to require federal agencies to review continually the environmenal effects of nuclear power plants already licensed, in the absence of any further proposal for federal action. Four years ago, the Court admonished the court of appeals that:

> Nuclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try nuclear energy, establishing a reasonable review process in which courts are to play only a limited role. The fundamental policy questions appropriately resolved in Congress and in the state legislatures are *not* subject to reexamination in the federal courts under the guise of judicial review of agency action. Time may prove wrong the decision to develop nuclear energy, but it is Congress or the States within their appropriate agencies which must eventually make that judgment.

Vermont Yankee Nuclear Power Corp. v. *Natural Resources Defense Council, Inc.*, 435 U. S. at 557-58 (1978) (emphasis in original). NEPA has never been interpreted to require agencies to elevate environmental concerns over other appropriate considerations; on the contrary, once an agency has made a decision involving NEPA's procedural requirements, a reviewing court's role is limited to insuring that the agency has considered environmental consequences before deciding a course of action on a proposal. *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, 444 U. S. 223, 227 (1980) (quoting *Kleppe* v. *Sierra Club*, 427 U. S. at 410 n. 21). The lower court's decision is an unwarranted departure from the limited role of reviewing agency action, and it should not stand uncorrected.

CONCLUSION

For the reasons stated above, *amicus curiae* Atomic Industrial Forum urges the Court to reverse the decision of the court of appeals.

Respectfully submitted,

Michael I. Miller
Counsel of Record
PHILIP P. STEPTOE
ELENA Z. KEZELIS
ISHAM, LINCOLN & BEALE
Suite 5200
Three First National Plaza
Chicago, Illinois 60602
(312) 558-7500
Attorneys For Amicus Curiae

LINDA L. HODGE
Staff Counsel
Atomic Industrial Forum, Inc.
7101 Wisconsin Avenue
Bethesda, Maryland 20814

Office - Supreme Court, U.S.
FILED
DEC 16 1982
ALEXANDER L. STEVAS,
CLERK

Nos. 81-2399 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON CO., *et al.*,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION

and

THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF *AMICUS CURIAE* OF EDISON ELECTRIC INSTITUTE IN SUPPORT OF PETITIONERS

ROBERT L. BAUM
Counsel of Record
PETER B. KELSEY
EDWARD H. COMER
WILLIAM L. FANG
EDISON ELECTRIC INSTITUTE
1111 19th Street, N.W.
Washington, D.C. 20036
(202) 828-7679

December 16, 1982

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

QUESTION PRESENTED

Whether, in addition to the Nuclear Regulatory Commission's analysis of the actual impacts of a proposed action on the natural environment, the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.*, requires the Commission to analyze and predict psychological impacts caused by fears concerning that action.

TABLE OF CONTENTS

	Page
QUESTION PRESENTED	i
TABLE OF CONTENTS	iii
TABLE OF AUTHORITIES	iv
INTEREST OF *AMICUS CURIAE*	3
SUMMARY OF ARGUMENT	5
ARGUMENT	6
I. Congress Intended Environmental Impact Statements To Focus On The Analysis Of Actual Impacts On The Natural Environment	7
II. The Court Of Appeals' Decision Is Inconsistent With Cases That Limit The Content Of Environmental Impact Statements So As To Exclude Consideration Of Psychological Impacts	13
A. Cases Confirm That The Core Concerns Of Environmental Impact Statements Are Actual Impacts On The Natural Environment	13
B. Courts Have Used A Variety Of Rationales To Limit The Content Of Environmental Impact Statements	14
C. Prevailing Cases Hold That NEPA Does Not Require An Analysis Of Psychological Impacts	18
CONCLUSION	21

TABLE OF AUTHORITIES

CASES	Page
Aberdeen & Rockfish R.R. Co. v. SCRAP, 422 U.S. 289 (1975)	4, 13
Carolina Environmental Study Group v. United States, 510 F.2d 796 (D.C. Cir. 1975)	15
Chelsea Neighborhood Ass'ns v. U.S. Postal Service, 516 F.2d 378 (2d Cir. 1975)	20
Citizens Against Toxic Sprays, Inc. v. Bergland, 428 F.Supp. 908 (D. Or. 1977)	14
City of New York v. U.S. Department of Transportation, 539 F.Supp. 1237 (S.D.N.Y. 1982), *appeal docketed*, No. 82-6094 (2d Cir., filed Aug. 5, 1982)	20
Como-Falcon Coalition, Inc. v. U.S. Department of Labor, 465 F.Supp. 850 (D. Minn. 1978), *aff'd as modified sub nom. Como-Falcon Community Coalition, Inc. v. U.S. Department of Labor*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980)	19
Concerned About Trident v. Rumsfeld, 555 F.2d 817 (D.C. Cir. 1977)	15
Environmental Defense Fund, Inc. v. Hoffman, 566 F.2d 1060 (8th Cir. 1977)	15
First National Bank of Chicago v. Richardson, 484 F.2d 1369 (7th Cir. 1973)	19
Goodman Group, Inc. v. Dishroom, 679 F.2d 182 (9th Cir. 1982)	13
Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973)	16, 19, 20
Hanly v. Mitchell, 460 F.2d 640 (2d Cir.), *cert. denied*, 409 U.S. 990 (1972)	20
Image of Greater San Antonio, Texas v. Brown, 570 F.2d 517 (5th Cir. 1978)	13
Kleppe v. Sierra Club, 427 U.S. 390 (1976)	4
Lange v. Brinegar, 625 F.2d 812 (9th Cir. 1980)	15
Maryland-National Capital Park and Planning Comm'n v. U.S. Postal Service, 487 F.2d 1029 (D.C. Cir. 1973)	14, 17, 19, 20
Metlakatla Indian Community v. Adams, 427 F.Supp. 871 (D.D.C. 1977)	13

TABLE OF AUTHORITIES—Continued

	Page
Monarch Chemical Works, Inc. v. Exon, 466 F.Supp. 639 (D. Neb. 1979)	19
National Ass'n of Government Employees v. Rumsfeld, 413 F.Supp. 1224 (D.D.C. 1976), *aff'd sub nom. National Ass'n of Government Employees v. Brown*, 556 F.2d 76 (D.C. Cir. 1977)	13
National Organization for Reform of Marijuana Laws v. U.S. Department of State, 452 F.Supp. 1226 (D.D.C. 1978)	14
Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827 (D.C. Cir. 1972)	14, 15
Nucleus of Chicago Homeowners Ass'n v. Lynn, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976)	19
People Against Nuclear Energy v. Nuclear Regulatory Commission, 678 F.2d 222 (D.C. Cir. 1982)	*passim*
Realty Income Trust v. Eckerd, 564 F.2d 447 (D.C. Cir. 1977)	15
Rucker v. Willis, 484 F.2d 158 (4th Cir. 1973)	16
Sunflower Alliance, Inc. v. Nuclear Regulatory Commission, No. 82-3563 (6th Cir., filed Sept. 13, 1982)	2
Trinity Episcopal School Corp. v. Romney, 387 F.Supp. 1044 (S.D.N.Y. 1974), *rev'd and remanded in part on other grounds*, 523 F.2d 88 (2d Cir. 1975)	19, 20
Trout Unlimited v. Morton, 509 F.2d 1276 (9th Cir. 1974)	15
United States v. Champlin Refining Co., 341 U.S. 290 (1951)	7
United States v. Universal C.I.T. Credit Corp., 344 U.S. 218 (1952)	7
Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978)	16, 18
Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017 (9th Cir. 1980)	15

TABLE OF AUTHORITIES—Continued

Page

Weinberger v. Catholic Action of Hawaii, 454 U.S. 139 (1981) 4
Wong Yang Sung v. McGrath, 339 U.S. 33 (1950) .. 7

STATUTES AND REGULATIONS

National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.* (1976) ..... *passim*
Section 101, 42 U.S.C. § 4331 ..... 5, 6, 12
Section 102(2)(C), 42 U.S.C. § 4332(2)(C) .. *passim*
40 C.F.R. § 1500.6 (1976) 16

LEGISLATIVE DOCUMENTS

A National Policy for the Environment, *Committee on Interior and Insular Affairs*, 90th Cong., 2d Sess. App. A (Comm. Print 1968), *printed in* Joint House-Senate Colloquium to Discuss a National Environmental Policy, *Hearing Before the Senate Comm. on Interior and Insular Affairs and the House Comm. on Science and Astronautics*, 90th Cong., 2d Sess. (1968) 7, 9
National Environmental Policy, *Hearing on S.1075 Before the Senate Comm. on Interior and Insular Affairs*, 91st Cong., 1st Sess. App. 1 (1969) 7
S. Rep. No. 91-296, 91st Cong., 1st Sess. (1969) .... *passim*
115 *Cong. Rec.* 3698 (1969) 11
115 *Cong. Rec.* 40416, 40417 (1969) 8, 10, 11
115 *Cong. Rec.* 40926 (1969) 10

MISCELLANEOUS

Carson, *Silent Spring* (The Riverside Press, 1962) 8
47 *Fed. Reg.* 31762 (1982) 2
Jackson, *Environmental Policy and the Congress*, PUBLIC ADMINISTRATION REVIEW, July/August 1968 8
In re Metropolitan Edison Co., 11 NRC 297 (1980) 20

TABLE OF AUTHORITIES—Continued

Page

Sands, *Sutherland Statutory Construction*, Vol. 2A (4th ed.) 7
Udall, *The Quiet Crisis* (Holt, Rinehart and Winston, 1963) 8
U.S. Nuclear Regulatory Commission, *Facilities License Application Record*, NUREG-0652, Vol. 1, No. 3 (Feb. 1982) 3
Whitaker, *Striking A Balance* (American Enterprise Institute for Public Policy Research, 1976) 8

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

Nos. 81-2399 and 82-358

METROPOLITAN EDISON CO., *et al.*,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION

and

THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF *AMICUS CURIAE* OF EDISON ELECTRIC INSTITUTE IN SUPPORT OF PETITIONERS

Edison Electric Institute ("EEI") hereby submits its brief *amicus curiae* in support of petitioners Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company ("Utility Petitioners") and the United States and the United States

Nuclear Regulatory Commission ("Government Petitioners"). Petitioners request this Court to reverse a decision by the United States Court of Appeals for the District of Columbia Circuit ("Court of Appeals"). That decision holds that the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 *et seq.* (1976), requires the Nuclear Regulatory Commission ("NRC"), in addition to its analysis of the actual impacts upon the natural environment from the operation of a nuclear power plant, to consider the "potential psychological health effects" on area residents resulting from their fears concerning the operation of the plant, even though the NRC's safety analysis concludes that the operation of the plant satisfies all applicable requirements. *People Against Nuclear Energy v. Nuclear Regulatory Commission*, 678 F.2d 222, 235 (D.C. Cir. 1982) ("PANE").[1]

---

[1] Judge Wright, joined by Judge McGowan, constituted the majority on the NEPA issue. Judge Wilkey dissented on this issue. Since petitioners seek review only of this NEPA issue, we will refer to Judge Wright's opinion on the NEPA issue as the majority and to Judge Wilkey's opinion on this issue as the dissent.

We believe the majority's holding cannot be limited to psychological *health* effects characterized as "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." 678 F.2d at 230. The NRC has issued a policy statement narrowly interpreting the Court of Appeals' holding for purposes of its application to administrative proceedings other than TMI-1. 47 *Fed. Reg.* 31762 (1982). This statement attempts to preclude consideration of psychological impact claims in all other proceedings. We agree with the United States and NRC, however, "that the logical implications of the court of appeals' analysis are far broader." Government Pet. for Cert. at 28 n.22. Indeed, absent reversal of this decision, "any Commission ruling excluding psychological stress contentions from a proceeding runs a substantial risk of reversal, for the reasons suggested by Judge Wilkey's dissent." *Id.*; *see Sunflower Alliance, Inc. v. Nuclear Regulatory Commission*, No. 82-3563 (6th Cir., filed Sept. 13, 1982). In all probability, unless this case is reversed it will be cited for the proposition that psychological impacts of whatever sort or degree are cognizable under NEPA.

EEI has obtained the written consent of all parties to this case for the filing of this brief pursuant to Rule 36.2 of this Court. The written consents have been filed with the Clerk of this Court.

INTEREST OF *AMICUS CURIAE*

EEI is the national association of investor-owned electric utility companies in the United States. Its members serve 99.6 percent of all customers of the investor-owned segment of the utility industry and 77 percent of the nation's electricity users. This case concerns matters of considerable importance to EEI's members who now or may in the future hold licenses and permits issued by federal agencies and are or will be subject to federal regulatory control.

The decision by the Court of Appeals in *PANE* holds that the psychological impacts which result from fears about a proposed action are cognizable under Section 102 (2) (C) of NEPA, 42 U.S.C. § 4332(2) (C). This will mean that federal agencies must predict the psychological impacts of their actions and, when such impacts are significant, analyze them in an environmental impact statement ("EIS"). This decision directly affects all those nuclear utilities which are regulated by the NRC. EEI member companies currently operate 70 of the nation's 81 nuclear power plants licensed to operate by the NRC and expect to operate an additional 51 units now under construction or in planning.[2] Psychological impact issues have been introduced in at least seven proceedings before the NRC, each of which involves an investor-owned electric utility member or members of EEI. Utility Pet. for Cert. at 9 n.11. In addition, by expanding the factors to be analyzed under NEPA, this decision also affects other aspects of utility operations, such as the transportation

---

[2] U.S. Nuclear Regulatory Commission, *Facilities License Application Record*, NUREG-0652, Vol. 1, No. 3 (February 1982) (updated through December 8, 1982).

of fuel or waste, the construction of hydroelectric dams and the disposal of hazardous waste, which are subject to federal regulatory control that triggers the requirements of NEPA.[3]

---

[3] In addition to the issue presented, EEI shares the views of the Government Petitioners (Gov. Pet. for Cert. at 17-18 n.12), Utility Petitioners (Utility Pet. for Cert. at 7 n.10), *amicus* Atomic Industrial Forum ("AIF") (AIF Brief Supporting Pet. for Cert. at 5-14) and *amicus* American Mining Congress ("AMC") (AMC Brief Supporting Pet. for Cert. at 7-9) that the Court of Appeals, while not compelled to do so under the facts of this case, has reached far beyond NEPA and apposite court decisions by stating that the NRC's continuing regulatory responsibility over licensed nuclear plants is a "Federal action" under Section 102(2)(C) of NEPA. 678 F.2d at 231-232. Thus, the Court of Appeals appears to require, even in the absence of a proposed action, that the NRC continually analyze changed circumstances and new information to determine their threshold significance and, where such significance is found, embark on the full EIS process. As Judge Wilkey observed, "[t]his is a holding of considerable breadth." 678 F.2d at 244.

We agree with the Government and Utility Petitioners, AIF and AMC that this position of the court below is also erroneous. This position conflicts with prior decisions of this Court which have confirmed that the requirement for an EIS in Section 102(2)(C) of NEPA is triggered only by a specific proposal for a major federal action having a significant environmental impact. *Aberdeen & Rockfish R.R. Co. v. SCRAP*, 422 U.S. 289, 320 (1975) (*"SCRAP II"*); *Kleppe v. Sierra Club*, 427 U.S. 390, 401-402 nn.12-13 (1976); *Weinberger v. Catholic Action of Hawaii*, 454 U.S. 139, 144-145 (1981). In *SCRAP II*, for example, this Court held that an EIS is not required until an agency "makes a recommendation or report on a *proposal* for federal action." 422 U.S. at 320 (emphasis in original). In the absence of a proposal for action, such as a proposal to approve, disapprove, amend, or otherwise change a program or project, an agency's responsibility under Section 102(2)(C) of NEPA is nil.

The position of the Court of Appeals, if not disaffirmed by this Court, is likely to be cited in innumerable proceedings before federal agencies and the courts. Therefore, we urge that in ruling on the issue directly presented in this case, this Court also makes clear that, in the absence of a proposal for action by an agency, Section 102(2)(C) of NEPA does not impose any obligation upon a federal agency.

SUMMARY OF ARGUMENT

This case presents this Court with its first opportunity to examine the limits of the phrase "environmental impact" in terms of the content of an EIS required by Section 102(2)(C) of NEPA. This Court must determine whether, in addition to analyzing the actual impacts of proposed actions on the natural environment, federal agencies must analyze and predict the effects of the public perceptions about and reactions to those proposals.

The concerns which prompted the growth of the environmental movement in the 1960's had their roots in demonstrable evidence that man was despoiling the earth's finite natural resources by polluting the air, water, soil, and living space. In view of this evidence, Congress passed NEPA to insure that whatever the nature of the proposed actions being considered by the federal government, the decisionmaking process would take into account the actual effects of those actions on the natural environment.

It is unquestionably true that references can be uncovered in the legislative history of NEPA to human well-being, including social and psychological well-being. However, these general statements of concern for human well-being should be read as reflecting the broad policy goals of Section 101 of NEPA rather than as specifying factors to be analyzed in an EIS. Because of the recognized dependence of human welfare on the quality of the environment, Congress felt that informed decisionmaking based upon an analysis of the actual impacts of man's activities on the natural environment would promote, as a byproduct, NEPA's broad national policy goals, including psychological well-being.

Judicial decisions confirm the thrust of the legislative history and public consciousness at the time NEPA was enacted by stating that the core concerns of NEPA are actual impacts upon the natural environment. Courts

have applied a rule of reason and other rationales to confine the hard look that agencies must take to environmental effects which can be objectively measured or evaluated. They have done so to avoid diluting the usefulness of the EIS as a decisionmaking tool.

Finally, the federal appellate and district courts which have specifically addressed the issue in this case have, with rare exceptions, held that NEPA does not require agencies to analyze and predict the psychological impacts of proposed actions. The rationale for these holdings is that psychological impacts are too far removed from the purpose of NEPA and are not capable of the type of measurement which would permit meaningful evaluation and prediction in an EIS. This Court should confirm the validity of the reasoning of these cases and hold that, however the limits of an EIS should be defined, psychological impacts caused by public fears about a proposed action fall outside those parameters.

ARGUMENT

NEPA, signed into law on January 1, 1970, 42 U.S.C. §§ 4321 *et seq.*, represents Congress' most comprehensive response to the public's environmental awakening during the 1960's.[4] Section 101 of NEPA, 42 U.S.C. § 4331, established broad national environmental policies. To achieve these policies Section 102, 42 U.S.C. § 4332, established certain "action-forcing" procedures. S. Rep. No. 91-296 at 9. Of these procedures, the requirement to prepare "a detailed statement . . . on (i) the environmental impact of the proposed action" for "major Federal actions significantly affecting the quality of the human environment" (Section 102(2)(C), 42 U.S.C. § 4332(2)(C)) is the action-forcing requirement at issue. This case provides the first opportunity for this Court to

---

[4] *See* S. Rep. No. 91-296, 91st Cong., 1st Sess. 13-14 (1969).

examine the meaning of "environmental impact" in this context.

Stripped of all its embellishments, the fundamental question in this case is whether psychological impacts are required to be included among the "environmental impact[s]" to be analyzed by federal agencies in an EIS. NEPA does not define the phrase "environmental impact." Accordingly, reference to NEPA's legislative history,[5] the public concerns[6] which motivated Congress to act, and relevant court decisions should guide the Court.

I. Congress Intended Environmental Impact Statements To Focus On The Analysis Of Actual Impacts On The Natural Environment.

The statements and writings of the 1960's reflect the public concerns which prompted Congress to enact NEPA.[7] That period was marked by a general awakening of the public consciousness concerning the impact of man's activities on the earth's finite natural resources. Man's technological advances were recognized as potential threats to our long-term health and prosperity because of their impact on these resources.

---

[5] *E.g., United States v. Universal C.I.T. Credit Corp.*, 344 U.S. 218, 221 (1952); *see generally* C. Sands, *Sutherland Statutory Construction*, Vol. 2A, § 48.03 (4th ed.).

[6] *E.g., United States v. Champlin Refining Co.*, 341 U.S. 290, 297 (1951); *Wong Yang Sung v. McGrath*, 339 U.S. 33, 36 (1950); *see generally* Sands, *supra* n. 5, at § 56.05.

[7] *See, e.g.*, A National Policy for the Environment, *Committee on Interior and Insular Affairs*, 90th Cong., 2d Sess. App. A (Comm. Print 1968), *printed in* Joint House-Senate Colloquium to Discuss a National Environmental Policy, *Hearing Before the Senate Comm. on Interior and Insular Affairs and the House Comm. on Science and Astronautics*, 90th Cong., 2d Sess. 87, 117 (1968); National Environmental Policy, *Hearing on S. 1075 Before the Senate Comm. on Interior and Insular Affairs*, 91st Cong., 1st Sess. App. 1, at 181, 192 (Bibliography on Environmental Issues) (1969).

For example, Rachel Carson's publication of *Silent Spring* in 1962 alerted the nation to the public health threat posed by the indiscriminate introduction of chemicals into our environment.[8] Stewart Udall's *The Quiet Crisis* chronicled our diminishing open space and the overall reduction in the quality of our environment due to pollution, noise and blight.[9] The public response to the January 28, 1969, Santa Barbara oil spill gave added impetus for Congress to enact a national environmental policy. "The Santa Barbara incident was comparable to tossing a match into a gasoline tank: it exploded into the environmental revolution. . . ." [10]

The life support systems developed for manned exploration of space during the 1960's provided an apt analogy in the popular literature for man's continued survival on earth.

> Adlai Stevenson, I believe, was the first to note that our space program illustrates the fragile character of the system on which life depends. What is true in a small way of life in a small space ship is true in a large way of the earth. This new living experience of spaceship exploration reminds us that the components and processes of the biosphere cannot be dismantled and disrupted without risk to our survival.

Henry M. Jackson, *Environmental Policy and the Congress*, PUBLIC ADMINISTRATION REVIEW, July/August 1968, at 305. References to our life support system appear repeatedly in the legislative history of NEPA.[11]

---

[8] Rachel Carson, *Silent Spring* (The Riverside Press, 1962).

[9] Stewart L. Udall, *The Quiet Crisis* (Holt, Rinehart and Winston, 1963).

[10] John C. Whitaker, *Striking A Balance* 264 (American Enterprise Institute for Public Policy Research, 1976).

[11] *E.g.*, S. Rep. No. 91-296 at 8, 13; 115 *Cong. Rec.* 40416, 40417 (1969) (remarks of Sen. Jackson).

Congress compiled "a great deal of testimony" and "[e]xtensive collections of commentary" (S. Rep. No. 91-296 at 12) regarding environmental problems before enacting NEPA. From this "voluminous data" (*id.*) the Senate Committee on Interior and Insular Affairs articulated some "basic propositions [which] summarize the situation of contemporary America and the Federal Government regarding the management of the environment." *Id.* These propositions related to "unprecedented pressures upon a finite resource base," "man's ability to alter the physical environment," and "a serious threat to the Nation's life support system." *Id.* at 13.

Among the source material cited by the Senate Committee on Interior and Insular Affairs [12] from which these propositions were derived was a special report to the Committee entitled "A National Policy for the Environment." [13] The report's summation was used virtually without change as the summary section in Senate Report No. 91-296.[14]

> Although historically the Nation has had no considered policy for its environment, the unprecedented pressures of population and the impact of science and technology make a policy necessary today. The expression "environmental quality" symbolizes the complex and interrelated aspects of man's dependence upon his environment. Most Americans now understand, far better than our forebears could, the nature of man-environment relationships. The evidence requiring timely public action is clear. *The Nation has overdrawn its bank account in life-sustaining natural elements. For these elements—air, water, soil, and*

---

[12] S. Rep. No. 91-296 at 11 n.4.

[13] Joint House-Senate Colloquium, *supra* n. 7, at 87.

[14] *Compare* S. Rep. No. 91-296 at 16-17 *with* A National Policy for the Environment *printed in* Joint House-Senate Colloquium, *supra* n. 7, at 115.

> *living space*—technology at present provides no substitutes. . . .
>
> Natural beauty, increased recreational opportunity, urban esthetics and other amenities would be important *byproducts* of a national environmental policy. They are worthy public objectives in their own right. But the compelling reasons for a national policy are more deeply based. The survival of man, in a world in which decency and dignity are possible, is the basic reason for bringing man's impact on his environment under informed and responsible control. The economic costs of maintaining a life-sustaining environment are unavoidable. We have not understood the necessity for respecting the limited capacities of nature in accommodating itself to man's exactions, nor have we properly calculated the cost of adaptation in deteriorating conditions. In our management of the environment we have exceeded its adaptive and recuperative powers, and in one form or another we must now pay directly the costs of maintaining *air, water, soil, and living space* in quantities and qualities sufficient to our needs.

(Emphasis added.)

The legislative history of NEPA is replete with other expressions of concern for the actual impacts of man's activities. Specific and generic examples of these impacts are predominate: critical air and water pollution problems,[15] soil erosion,[16] degradation of unique ecosystems,[17] Santa Barbara oil well blowout,[18] loss of valuable

---

[15] *E.g.*, S. Rep. No. 91-296 at 4, 8; 115 *Cong. Rec.* 40926 (1969) (remarks of Reps. Saylor, Garmatz); 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[16] *E.g.*, S. Rep. No. 91-296 at 4; 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[17] *E.g.*, S. Rep. No. 91-296 at 4, 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[18] *E.g.*, S. Rep. No. 91-296 at 8.

open spaces,[19] rising noise levels,[20] lack of an assured water supply and the impact of a proposed super-jet airport on Everglades National Park,[21] proliferation of pesticides and chemicals,[22] thermal pollution,[23] radiation hazards[24] and urban crowding and congestion.[25] The common characteristic of these examples is that they involve some form of adverse physical impact upon man or the natural environment.

While there are references in the legislative history to congressional concern for human safety and productivity,[26] social and psychological well-being,[27] and an environment free of hazards to mental and physical well-being,[28] we believe that such references are not intended to govern the content of an environmental impact statement. Rather, these references relate to the broad, com-

---

[19] *E.g.*, *id.* at 4; 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[20] *E.g.*, S. Rep. No. 91-296 at 4; 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[21] *E.g.*, S. Rep. No. 91-296 at 8.

[22] *E.g.*, *id.* at 4, 8; 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[23] *E.g.*, S. Rep. No. 91-296 at 4; 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[24] *E.g.*, S. Rep. No. 91-296 at 4; 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[25] *E.g.*, S. Rep. No. 91-296 at 4; 115 *Cong. Rec.* 40417 (1969) (remarks of Sen. Jackson).

[26] *E.g.*, S. Rep. No. 91-296 at 8-9.

[27] *Id.* at 4.

[28] 115 *Cong. Rec.* 3698 (1969) (statement of Sen. Jackson on the introduction of S. 1075).

prehensive national policy goals enacted by Congress in Section 101 of NEPA.

These national policy goals reflect the understanding of the Congress and the public in the late 1960's that man's welfare in its broadest sense is dependent on maintaining the quality of our natural environment. As the Senate Report stated:

> *To provide a basis for advancing the public interest*, a congressional statement is required of the evolving national objectives of managing our physical surroundings, our land, air, water, open space, and other natural resources and environmental amenities.

S. Rep. No. 91-296 at 6 (emphasis added). While these goals are indeed broad, Congress viewed them as being achieved through a functional, reasonably analytical and objective appraisal of the actual impacts of a proposed action on our natural environment. The EIS requirement in Section 102(2)(C) implements the congressional belief that government decisionmaking should be environmentally informed, that is, based on a hard look at the actual impacts of a proposed action on our natural environment.

The Senate Report indicated that goals such as natural beauty, recreational opportunity, esthetics and other amenities would be important "byproducts" of the implementation of NEPA.[29] We believe that NEPA addresses psychological well-being no differently than it does these other goals. Just as informed decisions concerning actual impacts should enhance natural beauty and esthetics, so should such decisions enhance psychological well-being. This would occur directly by eliminating or mitigating the actual impacts on the natural environment which might give rise to any rational adverse psychological effects and indirectly by analyzing the bases for any rationally perceived harms.

---

[29] S. Rep. No. 91-296 at 17 quoted *supra* at 10.

II. The Court of Appeals' Decision Is Inconsistent With Cases That Limit The Content Of Environmental Impact Statements So As To Exclude Consideration Of Psychological Impacts.

A. Cases Confirm That The Core Concerns Of Environmental Impact Statements Are Actual Impacts On The Natural Environment.

In one of the first NEPA cases presented to this Court, Justice Douglas described NEPA as "a commitment to the preservation of our natural environment." *SCRAP II*, 422 U.S. at 331 (Douglas, J., dissenting in part). Other courts have agreed. The Fifth Circuit stated in *Image of Greater San Antonio, Texas v. Brown*, 570 F.2d 517, 522 (5th Cir. 1978) that "NEPA was enacted in recognition of the effect that man's activities—his technological advances, industrial expansion, resource exploitation, and urban development—have on the 'natural environment.' 42 U.S.C. § 4331. The primary concern was with the physical environmental resources of the nation."

The District of Columbia Circuit affirmed a district court decision which similarly stated that "[t]he primary concern [of NEPA] is the *physical* environmental resources of the nation. *See* S. Rep. No. 296, 91st Cong., 1st Sess. 4-10 (1969)." *National Ass'n of Government Employees v. Rumsfeld*, 413 F. Supp. 1224, 1229 (D.D.C. 1976), *aff'd sub nom. National Ass'n of Government Employees v. Brown*, 556 F.2d 76 (D.C. Cir. 1977) (emphasis in original). Another District of Columbia district court agreed that "the basic thrust of the Act is the management of this nation's physical surroundings and natural resources." *Metlakatla Indian Community v. Adams*, 427 F. Supp. 871, 875 (D.D.C. 1977). The Ninth Circuit stated in *Goodman Group, Inc. v. Dishroom*, 679 F.2d 182, 185 (9th Cir. 1982):

> Relating project impact to effects on the physical environment, such as water, air, and ecosystems, im-

plements the intent of Congress in enacting the statute. *Maryland*[-]*National Capital Park and Planning Commission v. U.S. Postal Service*, 487 F.2d 1029, 1037-39 (D.C. Cir. 1973). The reference point of physical environmental effects serves also to confine scarce resources for EIS preparation to those cases where they are most needed, a goal our circuit has identified as an appropriate one.

The analysis in an EIS of actual impacts on the natural environment extends to the impacts caused by physical agents affecting the human body, as in cases of ingestion of chemicals through the air or water, and exposure to radiation in the air. *National Organization for Reform of Marijuana Laws v. U.S. Department of State*, 452 F.Supp. 1226, 1232 (D.D.C. 1978) (possible damage to human health from toxic herbicides); *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F.Supp. 908, 927 (D. Or. 1977) (possible damage to human health from toxic pesticides); *Maryland-National Capital Park and Planning Comm'n v. U.S. Postal Service*, 487 F.2d 1029, 1039 (D.C. Cir. 1973) (possible danger to human health from flooding as a result of allegedly inadequate water and oil run-off systems), *cited in* 678 F.2d at 228 & n.8, 238 nn.15-16. However, such an analysis is far different from attempting to predict the public's subjective concerns about and reactions to such actual impacts. Courts have consistently drawn a line on the content of an EIS so as to exclude analysis of the latter kind.

B. Courts Have Used A Variety Of Rationales To Limit The Content Of Environmental Impact Statements.

The issue in this case should be treated in the same manner as in other cases where courts have limited the content of an EIS. In many of these cases courts have applied a rule of reason. The Court of Appeals for the District of Columbia Circuit articulated this rule in *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972):

> [T]he requirement in NEPA of discussion as to reasonable alternatives does not require "crystal ball" inquiry. Mere administrative difficulty does not interpose such flexibility into the requirements of NEPA as to undercut the duty of compliance "to the fullest extent possible." But if this requirement is not rubber, neither is it iron. *The statute must be construed in the light of reason if it is not to demand what is, fairly speaking, not meaningfully possible, given the obvious, that the resources of energy and research—and time—available to meet the Nation's needs are not infinite.*

(Emphasis added and footnote omitted.)

The Court of Appeals has held that the rule of reason applies to the content and analysis of an EIS. *Realty Income Trust v. Eckerd*, 564 F.2d 447, 454 (D.C. Cir. 1977). It has stated that the requirement of Section 102(2)(C)(i) of NEPA for a "detailed statement" on "the environmental impact" of a proposed action "requires description of reasonably foreseeable effects. A 'rule of reason' is used to ascertain those effects anticipated." *Carolina Environmental Study Group v. United States*, 510 F.2d 796, 798 (D.C. Cir. 1975). Thus, NEPA "do[es] not demand that the agency 'foresee the unforeseeable', make 'crystal ball' inquiries or prophecies instead of predictions. . . ." *Concerned About Trident v. Rumsfeld*, 555 F.2d 817, 830 (D.C. Cir. 1977) (footnote omitted). An EIS need not discuss remote and highly speculative consequences. *NRDC v. Morton, supra*, 458 F.2d at 838; *Concerned About Trident, supra*, 555 F.2d at 828; *Environmental Defense Fund, Inc. v. Hoffman*, 566 F.2d 1060, 1067 (8th Cir. 1977); *Lange v. Brinegar*, 625 F.2d 812, 818 (9th Cir. 1980); *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1026 (9th Cir. 1980); *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974).

NEPA has also been interpreted to exclude any requirement for the analysis of subjective views as to the merits of policies or proposals which are independent

from their actual environmental impacts. In *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 558 (1978), this Court indicated that fundamental policy questions, such as whether to promote development of nuclear energy, should be resolved in Congress and that NEPA is not the appropriate mechanism to address such issues. In a similar vein other courts have held that the subjective views of the public as to the desirability of a proposed action, as opposed to the environmental impact of that action, are beyond the scope of NEPA. *Hanly v. Kleindienst*, 471 F.2d 823, 830 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973); *Rucker v. Willis*, 484 F.2d 158, 162 (4th Cir. 1973). These cases reasoned that subjective personal views as to the desirability of a proposal are too far removed from NEPA's goal of obtaining reliable, objective information about the actual impacts of the proposal on the natural environment.[30]

In a related area, an early decision of the Court of Appeals for the District of Columbia Circuit recognized that NEPA does not require an agency to undertake a "hard look" "where the claim of NEPA application is

---

[30] In *Hanly*, the court of appeals held that the degree of public opposition to a proposed action is not to be considered in making the threshold decision whether the environmental impact of the proposal is significant. The Guidelines of the Council on Environmental Quality then in effect provided that an EIS should be prepared for "proposed actions, the environmental impact of which is likely to be highly controversial." 40 C.F.R. § 1500.6 (1976). However, the court of appeals stated that "the term 'controversial' apparently refers to cases where a substantial dispute exists as to the size, nature or effect of the major federal action rather than to the existence of opposition to a use, the effect of which is relatively undisputed." 471 F.2d at 830. It further noted that the alternative interpretation would "surrender the determination [when an EIS was required] to opponents of a major federal action, no matter how insignificant its environmental effect when viewed objectively." *Id.* at 830 n. 9A. This approach was fully endorsed by the Fourth Circuit in *Rucker, supra*, 484 F.2d at 162.

focused on alleged esthetic impact and the matters at hand pertain essentially to issues of individual and potentially diverse tastes." *Maryland-National Capital Park, supra*, 487 F.2d at 1039. The Court of Appeals reached this conclusion because of the difficulty of addressing subjective opinions:

> That some, or perhaps all, environmental impacts have an esthetic facet, does not mean that all adverse esthetic impacts affect environment. That is neither good logic nor good law. Some questions of esthetics do not seem to lend themselves to the detailed analysis required under NEPA for a § 102(C) [sic] impact statement. Like psychological factors they "are not readily translatable into concrete measuring rods." *Hanly v. Kleindienst, supra*, 471 F.2d at 833 n.10. The difficulty in precisely defining what is beautiful cannot stand in the way of expressions of community choice through zoning regulation . . . . But the difficulties have a bearing on the intention of Congress, and whether it contemplated, for example, a requirement of a detailed "environmental impact statement," and concomitant investigation, because of the possiblity [sic] that each new Federal construction would be ugly to some, or even most, beholders, on such issues as: Is this proposed building beautiful? Or, what is the esthetic effect of placing the "controversial" Picasso statue in front of the Civic Center building in Chicago?

487 F.2d at 1038 (citation and footnote omitted).

In *Vermont Yankee, supra*, 435 U.S. at 551, this Court applied the rule of reason to NEPA's requirement that an EIS analyze "alternatives to the proposed action", 42 U.S.C. § 4332(2)(C)(iii) (1976), stating:

> But, as should be obvious even upon a moment's reflection, the term "alternatives" is not self-defining. To make an impact statement something more than an exercise in frivolous boilerplate *the concept of alternatives must be bounded by some notion of feasibility.*

(Emphasis added.) A "notion of feasibility" should be applied as well to the environmental impacts analyzed in an EIS in order to avoid a frivolous exercise.

The effect of these decisions has been to maintain the integrity and usefulness of the EIS as a decisionmaking tool. The EIS focuses upon those actual impacts upon the natural environment which can be measured and studied objectively. Courts have not required EIS's to analyze subjective matters, such as personal esthetic tastes or policy opinions, which are further removed from NEPA's core environmental concerns and are difficult to measure and address objectively.

Using the rationale of these cases, this Court should establish that an EIS need not analyze psychological impacts. Such matters are far too subjective, too difficult to measure and too removed from the core concerns of NEPA with respect to actual impacts on the natural environment for Congress to have intended, or this Court reasonably to require, an analysis of such impacts in an EIS. In addition, as utility petitioners show, requiring an EIS to analyze subjective fears and perceptions will divert agency resources from the objective analysis of actual environmental impacts and diminish the relative weight and importance given to such impacts.

C. Prevailing Cases Hold That NEPA Does Not Require An Analysis Of Psychological Impacts.

The prevailing view of the courts of appeals and district courts which have addressed the issue is that NEPA does not require federal agencies to analyze and predict the psychological impacts of a proposed action. The reasoning of these cases has been identified by Judge Wilkey's dissent in this case:

> They are based largely on the fact that psychological concerns are simply too far removed from the purpose of NEPA, which is to ensure that an agency considers the environmental effects of a decision, not

> the reactions of affected individuals to the risk of those environmental effects. They also rest on the inherent difficulties in attempting to measure and incorporate into the environmental analysis the differing psychological states of the affected persons.

678 F.2d at 240. This reasoning is consistent with the legislative history and cases discussed above.

The first prong of the underlying rationale for the decisions identified by Judge Wilkey (678 F.2d at 239-240 & nn.19-21) concerns the focus of an EIS: to analyze the actual impacts of a proposed action on our natural environment. Concerns such as the psychological impacts at issue here are simply too far removed from this focus and from the objective appraisal of such actual impact which Congress expected in an EIS. An examination of the relevant federal district and appellate court decisions in the Second, Seventh, Eighth and District of Columbia Circuits, which are discussed in detail by the petitioners, confirms this point. *Hanly, supra*, 471 F.2d at 833; *Trinity Episcopal School Corp. v. Romney*, 387 F.Supp. 1044, 1078-1079 (S.D.N.Y. 1974), *rev'd and remanded in part on other grounds*, 523 F.2d 88 (2d Cir. 1975); *First National Bank of Chicago v. Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973); *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976); *Como-Falcon Coalition, Inc. v. U.S. Department of Labor*, 465 F.Supp. 850, 861-862 (D. Minn. 1978), *aff'd as modified sub nom. Como-Falcon Community Coalition, Inc. v. U.S. Department of Labor*, 609 F.2d 342, 345 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); *Monarch Chemical Works, Inc. v. Exon*, 466 F.Supp. 639, 657 (D. Neb. 1979); *Maryland-National Capital Park, supra*, 487 F.2d at 1037.

The second prong of the underlying rationale for the cases identified by Judge Wilkey (678 F.2d at 240-241 & nn.23-24) is that psychological impacts are not suscep-

tible of the kind of measurement which would allow meaningful consideration and prediction in an EIS. *Hanly, supra,* 471 F.2d at 833 n.10 ("psychological factors are not readily translatable into concrete measuring rods"); *Trinity Episcopal School Corp., supra,* 387 F.Supp. at 1078-1079; *Maryland-National Capital Park, supra,* 487 F.2d at 1038.[31]

Two lower court decisions seem to be inconsistent with the prevailing view of the cases discussed above. In one case that is on appeal to the circuit court, *City of New York v. U.S. Department of Transportation,* 539 F.Supp. 1237 (S.D.N.Y. 1982), *appeal docketed,* No. 82-6094 (2d Cir., filed Aug. 5, 1982), the district court required the Department of Transportation to consider community fears of transporting radioactive material. This fails to follow other Second Circuit decisions. *Hanly v. Mitchell,* 460 F.2d 640 (2d Cir.), *cert. denied,* 409 U.S. 990 (1972); *Hanly v. Kleindienst, supra.* Also, *Chelsea Neighborhood Ass'ns v. U.S. Postal Service,* 516 F.2d 378 (2d Cir. 1975), has been cited by People Against Nuclear Energy for the proposition that an agency must analyze in an EIS the emotional well-being of people affected by a proposed action. Reply Brief for Petitioner, Aug. 18, 1981, at 28, *People Against Nuclear Energy v. Nuclear Regulatory Commission,* No. 81-1131 (D.C. Cir.). To the extent it is so read, it is also inconsistent with the *Hanly* decisions.

---

[31] Problems of measurement in the EIS context are particularly acute in this case, where the decisionmaker would face the highly speculative task of predicting the psychological impacts of the restart of TMI-1. The brief of *amicus curiae* Scientists and Engineers for Secure Energy, Inc. highlights the impossible nature of such a task given the current state of the art. Indeed, the only fact-finding body which addressed this issue, the Atomic Safety and Licensing Board, stated, "We cannot identify a source of evidence which would permit the measurement of the psychological stress phenomenon well enough for use in a full-scale cost/benefit balancing in an EIS." *In re Metropolitan Edison Co.,* 11 NRC 297, 305 (1980); Joint Appendix 40-41.

In summary, the EIS has been a useful tool in focusing the attention of decisionmakers on the environmental consequences of federal actions. By doing so, it has fulfilled NEPA's purposes of protecting man's life support systems and, as a consequence, enhancing the quality of life. While the goals of NEPA are broad, courts, in order to preserve the usefulness of the EIS, do not require or permit the use of the document for the debate of policy or matters which are extremely speculative and, in the last analysis, subjective in nature. This Court should preserve the integrity of the EIS process by which the government examines the environmental impact of its actions by making clear that whatever else that examination may encompass, psychological impacts caused by fears are not included.

CONCLUSION

For the foregoing reasons, *amicus curiae* Edison Electric Institute respectfully submits that the decision of the Court of Appeals should be reversed.

Respectfully submitted,

ROBERT L. BAUM
Counsel of Record
PETER B. KELSEY
EDWARD H. COMER
WILLIAM L. FANG
EDISON ELECTRIC INSTITUTE
1111 19th Street, N.W.
Washington, D.C. 20036
(202) 828-7679

December 16, 1982

Office - Supreme Court, U.S.
FILED
DEC 16 1982
STEVAS,
CLERK

Nos. 81-2399 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, *et al.*,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

and

UNITED STATES NUCLEAR REGULATORY COMMISSION
and the UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents,

On a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF OF THE NATIONAL ASSOCIATION OF MANUFACTURERS AS AMICUS CURIAE IN SUPPORT OF PETITIONERS

WILLIAM E. BLASIER
General Counsel

JAN S. AMUNDSON
Deputy General Counsel
Counsel of Record
NATIONAL ASSOCIATION OF MANUFACTURERS
1776 F Street, N.W.
Washington, D.C. 20006
(202) 626-3860
Attorneys for Amicus Curiae

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

TABLE OF CONTENTS

	Page
Interest of the Amicus	1
Summary of the Case	2
Summary of the Argument	3
Argument	
I. The Court of Appeals for the District of Columbia Circuit Erroneously Determined That NEPA Requires An Assessment of Psychological Stress	3
II. This Decision Is Contrary to Other Court Decisions	8
Conclusion	9

TABLE OF AUTHORITIES

Cases: Page

Breckinridge v. Rumsfeld, 537 F.2d 864 (6th Cir. 1976), *cert. denied*, 429 U.S. 1061 (1977) 8

Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) 9

Kleppe v. Sierra Club, 427 U.S. 390 (1976) 4

Maryland-National Park and Planning Commission v. United States Postal Service, 487 F.2d 1029 (D.C. Cir. 1973) 9

Nucleus of Chicago Homeowners Association v. Lynn, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976) 9

People Against Nuclear Energy v. United States Nuclear Regulatory Commission, 678 F.2d 222 (D.C. Cir. 1982) 6, 8

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978) 6

Statutes and Regulations:

Federal Water Pollution Control Act of 1972, 42 U.S.C. §§ 1857 *et seq.* 4

National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321 *et seq.* 2

Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901 *et seq.* 4

40 C.F.R. §§ 1500 *et seq.* 4

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

Nos. 81-2399 and 82-358

METROPOLITAN EDISON COMPANY, *et al.*,
Petitioners,
v.
PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

and

UNITED STATES NUCLEAR REGULATORY COMMISSION
and the UNITED STATES OF AMERICA,
Petitioners,
v.
PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents,

On Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF OF THE NATIONAL ASSOCIATION OF MANUFACTURERS AS AMICUS CURIAE IN SUPPORT OF PETITIONERS

INTEREST OF AMICUS CURIAE

With consent of all the parties, the National Association of Manufacturers (NAM) files this brief in support of the Petitioners. The NAM is a non-profit voluntary business association incorporated under the laws of the State of New York. NAM represents approximately 12,000 manufacturing and related businesses and is affiliated with an additional 158,000 organizations through

our National Industrial Council and Associations Department. The membership of NAM represents an estimated 80 percent of all goods manufactured in the United States.

The members of NAM are critically involved in the production and development of all manufactured products and those resources needed to fuel and sustain our industrial base. Thus, NAM members are regulated by most federal regulatory agencies including the Nuclear Regulatory Commission (NRC). Further, since the passage of the National Environmental Policy Act of 1969 (NEPA) the NAM membership has been involved in meeting the requisites of this congressional mandate. The instant decision involves the extension of NEPA beyond traditional bounds that have already been delineated by various courts including the Supreme Court. In our view, the potential impact of this decision is quite broad. Despite the efforts of the Court of Appeals for the District of Columbia Circuit to limit the decision to this specific factual situation, we believe the impact of this decision will be used in future decisions concerning other federal regulatory agencies. Hence, there is great potential for many NAM members to be affected by this decision and, as such, NAM has great concern about the ultimate ruling in this case.

SUMMARY OF THE CASE

In March of 1979 there was an accident at the Three Mile Island Nuclear Station Unit 2 (TMI 2). At that time, Three Mile Island Unit I (TMI 1) was shut down for ordinary maintenance and refueling. The NRC then ordered TMI 1 to be shut down indefinitely pending a hearing to determine safety-related issues at the plant. At the same time the Commission stated that it did not know whether psychological stress would be regarded as legally relevant to any determination relating to the restarting of TMI 1. Petitioners, People Against Nuclear Energy (PANE), attempted to intervene in the hearing on the restart of TMI 1 alleging that the TMI 2 accident

had caused severe trauma and stress and that the reopening of TMI 1 would aggravate and perpetuate this stress. The NRC ultimately excluded PANE's contentions from the hearing. PANE thereafter filed suit and on May 14, 1982, an amended final judgment was rendered by the United States Court of Appeals for the District of Columbia Circuit. The decision requires the NRC to determine if there is significant new information regarding psychological health since the license for TMI 1 was issued. If there is such information, the NRC must then prepare a supplemental environmental impact statement which would include a comprehensive evaluation of the psychological health effects relating to the restart of TMI 1.

SUMMARY OF THE ARGUMENT

The Circuit Court of Appeals has erroneously applied NEPA to allegations of psychological stress as a cognizable environmental impact. Further, the court makes arbitrary distinctions between types of trauma or anxiety. This is beyond the scope of NEPA. Drawing distinctions as to stress or anxiety are appropriate exercises for Congress or the regulatory authorities but not for the judiciary.

Other case precedent has already considered the significance of psychological stress in the NEPA process. The decision below is not in keeping with this tested precedent.

THE ARGUMENT

I. THE COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT ERRONEOUSLY DETERMINED THAT NEPA REQUIRES AN ASSESSMENT OF PSYCHOLOGICAL STRESS

When NEPA was passed in 1969, Congress recognized the necessity to juxtapose the purposes of any major federal action with the quality of man's environment. The purpose was not to inhibit or suspend major actions but to assure that the environment was not sacrificed. To

further this national goal, government agencies must prepare environmental impact statements. The interests of NEPA were to be in concert with other national objectives.

> NEPA announced a national policy of environmental protection and placed a responsibility upon the Federal Government to further specific environmental goals by "all practicable means, consistent with other essential considerations of national policy." NEPA § 101(b), 42 USC § 4331(b) [42 USCS § 4331(b)]. *Kleppe v. Sierra Club*, 427 U.S. 390, 409 (1976).

To achieve this purpose there are detailed procedures and obligations defined in the Council on Environmental Quality (CEQ) regulations, 40 C.F.R. §§ 1500 *et seq.* (1982), with which all federal agencies must comply.[1]

---

[1] The Court has added another novel dimension to NEPA which has not been raised by either Petitioner. The Court suggests that if a regulatory agency retains any oversight or responsibility over a proposed project that must comply with NEPA procedures, there is a continuing responsibility on the part of the agency to update impact statements upon receipt of information indicating a change of circumstances that might affect the environment. This is despite the fact that there may be no proposed changes to the major project. This issue, although not dispositive of this case, begs for judicial clarification. NEPA was not designed as a continual process. Rather, once the impact is assessed the project may be undertaken. Hence, there is some finality to the process that is incentive for companies to undertake major capital projects. In the wake of this decision, any further oversight by a regulatory agency would require continual update of environmental impacts. This is unnecessary as the CEQ regulations provide for update assessments in situations where changes in a project could impact the environment. To suggest that there is this continuous responsibility burdens the process and could have a chilling effect on future proposed actions.

Additionally, this concept would apply to many federal regulatory agencies that have a much larger regulated constituency than the NRC. Specifically, EPA would be unreasonably burdened in the licensing and permitting process under the Federal Water Pollution Control Act of 1972, 42 U.S.C. §§ 1857 *et seq.*, or the regulation of disposal sites under the Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901 *et seq.* This mentions only the tip of the ice-

Compliance with the requisites of NEPA is a long, exhaustive effort that views the in-depth effects of the proposed action. In the aftermath of the decision of the Circuit Court of Appeals, it now appears that psychological stress is to be given the same deference as those factors relating directly to the environment. In the case at bar, the suggested "psychological stress" was not associated with the actual safety of TMI 1. Rather, the stress was a product of the fear and anxiety attendant to the restart of the nuclear unit. This is not a direct impact on the environment or human health as contemplated by the statute or appropriately considered in the entire NEPA process. Further, the court has used judicial fiat to decide when contemplation of stress is appropriate under NEPA. The majority makes an arbitrary distinction between types of trauma or stress. In this instance, since the residual stress or anxiety is associated with fear of the possible restart of the operation of a nuclear power plant, compliance with all NEPA procedures is warranted according to the court.

This approach to the interpretation of a congressional statute is beyond judicial power. It is the Congress that is empowered with the duty and ability to decide national policy goals, how they are to be achieved, who is responsible for their implementation, and what issues, factors, and parties are to be covered or considered. A court cannot selectively determine when the statute applies and what are necessary procedures, particularly when distinctions are being made based upon specific facts and predilections. The majority's disfavor of nuclear energy is as apparent as their basis for selective application of NEPA procedures is lacking. This issue has been before this Court before wherein the Court stated:

---

berg as to how far reaching this decision could be. Thus, clarification of this issue would be most advantageous in the ultimate resolve of these important issues.

> It is in the light of this background of statutory and decisional law that we granted certiorari to review two judgments of the Court of Appeals for the District of Columbia Circuit because of our concern that they had seriously misread or misapplied this statutory and decisional law cautioning reviewing courts against engrafting their own notions of proper procedures upon agencies entrusted with substantive functions by Congress. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 525 (1978).

Any determination of procedures is the responsibility of Congress or the federal agency, in this instance the NRC, to prescribe what are the requisites of meeting the statute. The role of the court is to see that the mandates of Congress are met and that any regulations do not exceed or fall short of the statutory purposes. Courts are not responsible for determining specific procedures.

Now, the Court of Appeals for the District of Columbia Circuit dictates that psychological stress requires further environmental assessment, and, any significant incidence of such stress will necessitate additional findings pursuant to NEPA. Further if there are indications of psychological stress, NEPA applies because such stress is an effect on human health. However, the dissenting opinion by Judge Wilkey aptly points out the error of the majority opinion:

> This takes NEPA far beyond its intended purpose. *The environmental effects of a federal activity are now to include the views of the population itself on the very desirability of the activity*, as expressed through the alleged psychological distress people may suffer if the activity goes forward—no matter how scientifically ignorant and divorced from reality those views (fears) may be. In my view, this is a judgment for Congress, and one which has already been made in the case of nuclear power. *PANE v. NRC*, 678 F.2d 222, 239 (D.C. Cir. 1982) (Wilkey, J., dissenting) (emphasis in original) (footnote omitted).

Congress enunciated policies and goals in the enactment of NEPA. One of the stated goals is to "achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities . . . ." 42 U.S.C. § 4331 (1976). The NEPA process was developed to look at all factors involved with a major proposal and its direct impact on the environment. The siting of a nuclear plant necessarily includes consideration of the surrounding community. This was initially accomplished with the nuclear facility at TMI. In the aftermath of the incident, the NRC, considered what they determined were legitimate concerns attendant to the restart of TMI 1 following the incident at TMI 2. At the discretion of the NRC, an Environmental impact analysis and supplement were prepared.[2] The staff concluded there were no significant environmental impacts beyond those that were originally identified and evaluated when the plant was initially licensed. Safety of the operation of the plant is the crux of the decision and should not be diffused by questions of fear or stress occasioned by the concept of the restart of TMI 1. Stress and anxiety are speculative. What is stress to one individual may be tonic to another. To require assessment of such a nebulous, nonquantifiable issue puts an unnecessary burden upon the process of reviewing environmental impacts.

Now the court is saying that, in this instance the restart, and in another instance possibly the very operation of a nuclear facility, must contemplate psychological stress as a primary factor in any NEPA determination, regardless of any direct environmental effect. This has the potential to stymie any potential resolution of a proposed federal action. It gives precedence to speculative and individual perceptions rather than dealing with the readily ascertainable direct impacts of a major action on the environment. Additionally, the court below endeavors

---

[2] Joint Appendix at 48-88.

to draw distinctions between social dissatisfaction and medically recognized psychological impairments.[3] Such distinctions are fallacious in the context of NEPA requirements. It strains credulity to suggest that one can rationally differentiate between the fear and anxiety generated due to proximity to a nuclear plant and that generated due to proximity to a federal prison. The latter issue was determined not to require additional NEPA determinations. As Judge Wilkey points out in his well-reasoned dissent, *"In each case, however, what we are dealing with are fears and anxieties; if NEPA embraces fears and anxieties in this, it must in all."* *PANE v. NRC*, 678 F.2d at 241 (D.C. Cir. 1982) (Wilkey, J., dissenting) (emphasis in original).

To approach the instant situation involving the restart of TMI 1 as this court suggests is a usurpation of congressional authority and not in keeping with decisions in other NEPA challenges.

II. THIS DECISION IS CONTRARY TO OTHER COURT DECISIONS

The concept of psychological stress and its relationship to environmental concerns under NEPA is not novel. There have been several courts that have grappled with this issue and reached a contrary result to the court below. Admittedly, no other case has involved a nuclear energy facility. However, as argued in the dissenting opinion, it is inconsistent to determine that psychological stress is entitled to more attention in one situation than another. The ultimate desirability of any law is to treat generic situations with an even, single approach.

Various courts have already disposed of stress arguments and their cognizability under NEPA. In the Sixth Circuit, the court required "a primary impact on the physical environment." *Breckinridge v. Rumsfeld*, 537 F.2d 864 (6th Cir. 1976), *cert. denied*, 429 U.S. 1061

---

[3] *PANE v. NRC*, 678 F.2d at 228-30.

(1977). Similarly, other courts have considered the impact on the locality of socially undesirable facilities and have determined that NEPA did not apply to those situations. *E.g., Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) (location of a jail); *Nucleus of Chicago Homeowners Association v. Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976) (proximity of public housing). The D.C. Circuit has already determined that the introduction of low-income workers in a suburban setting does not activate NEPA consideration of trauma or stress. *Maryland-National Park and Planning Commission v. United States Postal Service*, 487 F.2d 1029 (D.C. Cir. 1973). In the face of these decisions, it is untenable that now this court accords great pre-eminence to the instant situation than those cases now decided.

CONCLUSION

The court below has made two departures from recognized precedent. Initially, the court mandates that psychological stress is a primary impact cognizable under NEPA procedures. The court has stepped beyond its judicial role and has assumed the stance of a regulatory body. This is beyond the authority given to judicial panels. Secondly, the court disregards judicial precedent concerning the issue of psychological stress. The court makes a distinction that this case is separate from other decisions because it involves the operation of a nuclear facility. The future use of this deviation from the statute and court precedent invites mischief in any and all areas of congressional determination and agency implementation of a given law. Raising the issue of psychological stress in the NEPA process has the potential to delay, thwart or prohibit the fruition of major federal actions. This is clearly not what Congress intended with the enactment of NEPA. The desirable result is that man and his accomplishments are to exist in harmony with the environment to the benefit of society as a whole. If fur-

ther specificity of mandates and procedures is warranted, it is Congress that must outline any additional or more comprehensive areas of compliance.

Thus, we respectfully request this Court to reverse the decision of the lower court.

Respectfully submitted,

WILLIAM E. BLASIER
General Counsel

JAN S. AMUNDSON
Deputy General Counsel
Attorneys for Amicus Curiae

Office - Supreme Court, U.S.
FILED
DEC 16 1982
ALEXANDER L. STEVAS,
CLERK

Nos. 81-2399 and 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY
AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION
AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF FOR *AMICUS CURIAE* SCIENTISTS AND ENGINEERS FOR SECURE ENERGY, INC.

JAMES P. MCGRANERY, JR.
Counsel of Record
WILLIAM A. CARNAHAN
MINDY A. BUREN
LEBOEUF, LAMB, LEIBY & MACRAE
1333 New Hampshire Ave., N.W.
Suite 1100
Washington, D.C. 20036
(202) 457-7500
Attorneys for Amicus Curiae

December 16, 1982

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	i
INTEREST OF SCIENTISTS AND ENGINEERS FOR SECURE ENERGY, INC.	2
SUPPLEMENTAL STATEMENT OF THE CASE	3
SUMMARY OF ARGUMENT	6
ARGUMENT	7
I. THE PROCEDURES EMPLOYED BY THE COMMISSION IN THE RESTART PROCEEDING WERE ADEQUATE TO ADDRESS ALL RATIONAL BASES FOR PSYCHOLOGICAL DISTRESS	7
A. The Commission Ensured that the TMI-1 Restart Proceeding Would Address All Rational Bases for Psychological Distress	7
B. The Commission Also Provided PANE the Opportunity to Make a Threshold Showing that Its Novel Psychological Distress Contention Should Be Considered	10
II. THE COURT OF APPEALS ERRED IN REQUIRING THE COMMISSION TO REDETERMINE THE ADMISSIBILITY OF PANE'S PSYCHOLOGICAL DISTRESS CONTENTION	14
III. THERE IS NO SCIENTIFICALLY VALID "EVIDENCE" RELEVANT TO AN ADJUDICATORY PROCEEDING FOR THE NEPA CONSIDERATION OF THE MENTAL HEALTH EFFECTS OF THE RESTART OF TMI-1	17
A. The Contention	18
B. Analysis in Light of the Scientific Literature	19
C. The Legal and Political Inferences	29
CONCLUSION	30

TABLE OF AUTHORITIES

Cases: Page

Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson, 685 F.2d 678 (D.C. Cir. 1982) 15

Georgia-Pacific Corp. v. EPA, 671 F.2d 1235 (9th Cir. 1982) 11

ICC v. Jersey City, 322 U.S. 503 (1944) 17

Korematsu v. United States, 323 U.S. 214 (1944) .. 30

Life of the Land v. Brinegar, 485 F.2d 460 (9th Cir. 1973), *cert. denied*, 416 U.S. 961 (1974) 12

National Indian Youth Council v. Watt, 664 F.2d 220 (10th Cir. 1981) 12

Natural Resources Defense Council, Inc. v. SEC, 606 F.2d 1031 (D.C. Cir. 1979) 15

New England Coalition on Nuclear Pollution v. NRC, 582 F.2d 87 (1st Cir. 1978) 12

North Slope Borough v. Andrus, 642 F.2d 589 (D.C. Cir. 1980) 9, 15

Roe v. Wade, 410 U.S. 113 (1973) 7, 18, 29

Sierra Club v. Sigler, 532 F.Supp. 1222 (S.D. Tex. 1982) 11, 12

Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980) 15, 17

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978) ("Vermont Yankee II") ..... *passim*

Commission Proceedings:

In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit No. 1 (ASLB, Sept. 21, 1979) (Memorandum and Order Ruling on Petitions and Setting Special Prehearing Conference) 4, 12

In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit No. 1 (ASLB, Oct. 16, 1979) (Memorandum and Order on Motions to Modify) 4, 5, 13

In the Matter of Metropolitan Edison Co., Three Mile Island, Unit No. 1, 14 N.R.C. 381 (ASLB 1981) 9

TABLE OF AUTHORITIES—Continued

Statutes: Page

National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4347 (1976 & Supp. IV 1980) ("NEPA") ..... *passim*

Regulations:

10 C.F.R. § 2.715a (1982) 10

Miscellaneous:

AMERICAN PSYCHIATRIC ASS'N, THE DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, 3d ed. (1980) ("DSM-III") 21, 23, 24

AMERICAN PSYCHIATRIC ASS'N, QUICK REFERENCE TO THE DIAGNOSTIC CRITERIA FROM DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, 3d ed. (1980) (*"Quick Reference"*) 21, 22, 23, 24

BARTON, COMMUNITIES IN DISASTER: A SOCIOLOGICAL ANALYSIS OF COLLECTIVE STRESS SITUATIONS (1970) 22

Bieliauskas, *Life Events, 17-OHCS Measures, and Psychological Defensiveness in Relation to Aid-Seeking*, 6 JOURNAL OF HUMAN STRESS No. 1 (March 1980) 25

Dynes & Quarantelli, *The Family and Community Context of Individual Reactions to Disaster*, PARAD, RESNICK & PARAD, EMERGENCY AND DISASTER MANAGEMENT: A MENTAL HEALTH SOURCE BOOK (1976) 22

ERICKSON, EVERYTHING IN ITS PATH: DESTRUCTION OF COMMUNITY IN THE BUFFALO CREEK FLOOD (1976) 20, 21

Fairbank and Hough, *Life Event Classification and the Event-Illness Relationship*, 5 JOURNAL OF HUMAN STRESS No. 2 (Sept. 1979) 25

Kasl, *Methods to Evaluate Behavioral Effects of Environmental Exposure*, THIRD ANNUAL SYMPOSIUM ON ENVIRONMENTAL EPIDEMIOLOGY (April 26-28, 1982) 26

TABLE OF AUTHORITIES—Continued

Page

Inaugural Address of Franklin D. Roosevelt, Sen. Doc. No. 1, 73d Cong., Special Sess. (1933) 3

Lifton, *Nuclear Energy and the Wisdom of the Body*, 32 THE BULLETIN OF THE ATOMIC SCIENTISTS No. 7 (1976) 27

Mason, *A Historical View of the Stress Field: Part One*, 1 JOURNAL OF HUMAN STRESS No. 1 (1975) 21

NARRATIVES OF WITCHCRAFT CASES 1648-1706 (Burr ed. 1966) 3

N.Y. Times, Dec. 12, 1982 at 30, Col. 1 19

Rahe and Arthur, *Life Change and Illness Studies*, 4 JOURNAL OF HUMAN STRESS No. 1 (March 1978) 25

Report of the President's Commission on THE ACCIDENT AT THREE MILE ISLAND, *The Need for Change: The Legacy of TMI* (1979) 20

Rose, *Editorial*, 3 JOURNAL OF HUMAN STRESS No. 1 (1977) 21

Rothman and Lichter, *The Nuclear Energy Debate: Scientists, The Media and The Public*, PUBLIC OPINION (Aug./Sept. 1982) 20

Session I: The Role of Stress in Hypertension, 5 JOURNAL OF HUMAN STRESS No. 2 (June 1979) 25

Singer, *An Introduction to Disaster: Some Considerations of a Psychological Nature*, 53 AVIATION, SPACE AND ENVIRONMENTAL MEDICINE No. 3 (March 1982) 20

STRESSFUL LIFE EVENTS: THEIR NATURE AND EFFECTS (Dohrenwend and Dohrenwend eds., 1973) 25

Antonovsky, *Conceptual and Methodological Problems in the Study of Resistance Resources and Stressful Life Events*, Chapter 15 (1969) 25

TAYLOR, DELIVERY OF MENTAL HEALTH SERVICES IN DISASTER: THE XENIA TORONADO (Disaster Research Center, Ohio State University 1976) .. 22

TABLE OF AUTHORITIES—Continued

Page

WALKER, FRAIZE, GORDON & JOHNSON, SUMMARY REPORT OF THE WORKSHOP ON PSYCHOLOGICAL STRESS ASSOCIATED WITH THE PROPOSED RESTART OF THREE MILE ISLAND, UNIT 1 (NUREG/CP-0026/MTR-82W26, April 1982) 23

Walsh, *Resource Mobilization and Citizen Protest in Communities Around Three Mile Island*, 29 SOCIAL PROBLEMS No. 1 (Oct. 1981) 28

Wilson, *Disaster and Mental Health*, BAKER & CHAPMAN, MAN AND SOCIETY IN DISASTER (1962) 22

Yamada and Ohori, *Public acceptance of nuclear power development in Japan*, PROCEEDINGS OF INTERNATIONAL CONFERENCE ON NUCLEAR POWER, IAEA; Salzburg, Austria (May 1977) .. 28

IN THE

Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399

METROPOLITAN EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY
AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

No. 82-358

UNITED STATES NUCLEAR REGULATORY COMMISSION
AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

---

BRIEF FOR *AMICUS CURIAE* SCIENTISTS AND ENGINEERS FOR SECURE ENERGY, INC.

In accordance with this Court's Rule 36.2, Scientists and Engineers for Secure Energy, Inc. ("SE$_2$") has received and filed with the Court the written consents of counsel for the parties to appear as an *amicus curiae* in this proceeding. This brief is submitted by SE$_2$ in support of Petitioners Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Elec-

tric Company in No. 81-2399, and Petitioners the United States Nuclear Regulatory Commission and the United States of America in No. 82-358.

INTEREST OF SCIENTISTS AND ENGINEERS FOR SECURE ENERGY, INC.

SE$_2$ supports the petitioners in this matter. SE$_2$ is an incorporated nationwide organization, formed in the Spring of 1976, of over 1000 faculty members and researchers from American colleges and universities, both State and private, and other persons engaged in the sciences. Its purpose is to correct the alarming degree of misunderstanding on fundamental scientific and technological issues permeating the national energy debate, especially with respect to the balancing of environmental concerns. In pursuing this objective SE$_2$ is committed to offering its views, based on the considerable knowledge and expertise of its members, to the public and to the various governmental agencies with responsibility for the development of a proper legal framework for the resolution of energy issues, including participation in judicial proceedings.

As citizens, members of SE$_2$ are deeply concerned for the well-being and future hopes of our society. SE$_2$ and its members have an interest in assuring that consideration of major federal actions is conducted under the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347 (1976 & Supp. IV 1980) ("NEPA"), in accord with scientific principles and that debate of pseudo-scientific questions be excluded from the decisionmaking process. Therefore, they support the petitioners urging reversal of the decision of the court of appeals in this matter.

In their professional roles, they are also keenly sensitive to the limits of scientific knowledge and meaningful adjudication.[1]

---

[1] Jack Zusman, M.D., M.P.H., Director of the Florida Mental Health Institute, provided particularly valuable assistance in the preparation of the medical and scientific aspects of this brief.

In particular, SE$_2$'s members are sensitive to the need to confine the consideration of issues in adjudicatory proceedings to those reasonably susceptible to proof in accord with the limits of scientific knowledge. This reflects the primacy of reason in our governance and the concomitant exclusion of the irrational—of fear. It is only when fear is admitted as a valid independent basis for action or inaction that our society has cause to tremble.[2] As President Franklin D. Roosevelt said, "the only thing we have to fear is fear itself—nameless, unreasoning, unjustified terror which paralyzes needed efforts to convert retreat into advance."[3]

In the case before the Court, the interest of the scientific community, as represented by SE$_2$, joins that of the legal community in urging that adjudicatory decisions on nuclear power be made on a rational basis (including whether there is any rational basis for fear) but that fear itself be rejected.

SUPPLEMENTAL STATEMENT OF THE CASE

SE$_2$ adopts and incorporates by reference the Statement of the Case contained in the Brief filed herein by Petitioners Metropolitan Edison Company, Jersey Central Power & Light Company and Pennsylvania Electric Company ("Metropolitan Edison"). The following additional information, however, is germane to SE$_2$'s argument.

---

[2] One of the most troubling periods of our colonial history occurred during the Salem witchtrials when ". . . the Judges desiring to bear due Testimony against such Diabolical Practices, were inclined to admit the validity of such a sort of Evidence as was not so clearly and directly demonstrable to Human Senses, as in other Cases is required, ..." Account by Dr. Deodat Lawson (c. 1700), reprinted in NARRATIVES OF WITCHCRAFT CASES 1648-1706, 150 (Burr ed. 1966).

[3] Inaugural Address of Franklin D. Roosevelt, Sen. Doc. No. 1, 73d Cong., Special Sess. 1 (1933).

The Licensing Board's Order of September 21, 1979

On September 21, 1979, the Atomic Safety and Licensing Board ("Board") issued an order noting[4]:

> we request any party or petitioner seeking to litigate psychological issues to submit a preliminary plan for the presentation of psychological distress evidence. *The plan should address the expected availability of expert testimony; factual testimony; and evidence of indirect indicators of continuing psychological distress*, such as population relocations and real estate values. *Of particular value would be a discussion of the state of the art of stress psychology and whether it can produce reliable evidence on the subject at hand.*

Id. at 24 (emphasis added).[5]

On October 1, 1979, People Against Nuclear Energy ("PANE") moved the Board to delete its request that petitioners submit a preliminary evidentiary plan. On October 16, 1979, the Board denied PANE's motion but granted an extension of time for submitting the plan.[6] The Board stated that:

> PANE has mischaracterized our request . . . we twice stated that our request was for a *preliminary*

---

[4] *In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit No. 1* (ASLB, Sept. 21, 1979) (Memorandum and Order Ruling on Petitions and Setting Special Prehearing Conference) at 26.

[5] Petitioners for leave to intervene were ordered to provide the Commission staff and the licensee with draft contentions by October 5, 1979, and final contentions, *"together with the bases for each contention set forth with reasonable specificity,"* no later than October 22, 1979. *Id.* at 25 (emphasis added). The petitioners' briefs on psychological distress issues were also required to be filed no later than October 22, 1979. *Id.*

[6] *In the Matter of Metropolitan Edison Co., Three Mile Island Nuclear Station, Unit No. 1* (ASLB, Oct. 16, 1979) (Memorandum and Order on Motions to Modify).

> plan, and we stated that we do not intend to bind the parties to a final approach to litigating the issue.

Id. at 2 (emphasis in original).

The Board further noted that it had requested a preliminary plan of evidence, distinct from a legal brief, because "this board in the discharge of its responsibilities *intends to be informed, if possible, how and if available evidence will justify a psychological distress contention.*" *Id.* at 3-4 (emphasis added). Finally, the Board expressed its surprise that PANE regarded its request for a preliminary plan to be improper and burdensome since the request should be viewed as "an invitation to petitioners affording them an early opportunity to convince the Board and the Commission that the psychological issues are suitable for adjudication." *Id.* at 4.

PANE'S Brief

In its brief, PANE argued that its psychological distress contention was "verifiable and measurable under the techniques of modern medical science." *Id.* at 12. PANE distinguished its contention from worry and concern on the ground that its "contention is that people have been traumatized in a manner that can be medically diagnosed and that their trauma will be compounded and made permanent by reopening TMI Unit 1." *Id.* at 6. PANE based the argument that its contention was subject to measurement on two assertions, including the assertion that "the diagnosable condition of 'post-traumatic stress disorder' has now been recognized and included in the most recent draft of the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association (DSM-III)." *Id.* at 12-13.

PANE's Preliminary Plan

PANE indicated that its case would consist of four parts: (1) the evaluation of studies done by others on the psychological impacts of the accident; (2) the presen-

tation of a comprehensive study to be done by PANE's expert witnesses on impacts in the area within five miles of TMI; (3) the testimony of individuals concerning their own experiences; and (4) the conclusions of PANE's expert witnesses concerning the psychological and community health impacts of the TMI Unit 2 accident and of the renewed operations of TMI Unit 1 (J.A. 26). PANE further stated that its experts would "explain the additional information that is needed in order to reach valid conclusions on the issues before the NRC" (J.A. 26).

The Board's Certification

In its certification, the Board stated that:

> *We cannot identify a source of evidence* which would permit the measurement of the psychological stress phenomenon well enough to use in a full-scale cost/benefit balancing in an EIS. *Nor do we know whether or not the state of the art can now produce such evidence.*

(J.A. 40-41) (emphasis added).

The Board's analysis then turned to a discussion of the Commission's authority under NEPA to consider psychological stress *outside the context of an EIS* and to take reasonable actions to mitigate those fears (J.A. 41).

SUMMARY OF ARGUMENT

This Court's decision in *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978) (*"Vermont Yankee II"*) requires reversal of the decision below because PANE failed to structure its participation in any meaningful fashion (a) by its failure to participate in the Commission's consideration of the safety issues which could form a reasonable basis for fear and (b) even when given the opportunity to show the relevance of its contention and the bases therefore, PANE failed to make more than a naked assertion of relevance and susceptibility to proof.

Also, the order of the court of appeals, on its face, violates *Vermont Yankee II* both by requiring repeated (if not additional) procedures to those already applied by the Commission and approved by this Court, and by requiring the Commission to investigate whether there are any "significant new circumstances or information available." The only relevant "circumstances" and "information" to the review of the Commission's decision was that available to it at the time of the decision. "If . . . litigants might demand rehearings as a matter of law because some new circumstance has arisen, . . . , or some new fact discovered, there would be little hope that the administrative process could ever be consummated in an order that would not be subject to reopening." *Vermont Yankee II*, 435 U.S. at 554-55 *quoting ICC v. Jersey City*, 322 U.S. 503, 514 (1944).

Finally, we present an analysis of the psychiatric, sociological and other literature demonstrating the absence of the consensus in methodology and fact required for an issue to be reasonably susceptible to proof in an adjudicatory proceeding. *See Roe v. Wade*, 410 U.S. 113, 159 (1973). Moreover, we suggest that when that state of the art is reached, it will provide another dimension to the consideration, including elimination or amelioration, of the causes of fear; it will not legitimize the consideration of fear itself.

ARGUMENT

I. THE PROCEDURES EMPLOYED BY THE COMMISSION IN THE RESTART PROCEEDING WERE ADEQUATE TO ADDRESS ALL RATIONAL BASES FOR PSYCHOLOGICAL DISTRESS.

A. The Commission Ensured that the TMI-1 Restart Proceeding Would Address All Rational Bases For Psychological Distress.

In both its July 2, 1979 Order requiring the continued shutdown of TMI-1 (J.A. 8), and its August 9, 1979 Order setting forth the procedures to be followed at the

restart proceeding (J.A. 9-24), the Commission stressed the need for "reasonable assurance that [TMI-1] can be operated without endangering the health and safety of the public" prior to restart (J.A. 10). To provide that assurance, the Commission ordered that TMI-1 remain in a cold shutdown condition pending (1) satisfactory completion by the licensee of certain "short-term" actions (J.A. 13-15)[7]; (2) reasonable progress by the licensee toward satisfactory completion of certain "long-term" actions (J.A. 15-16)[8]; and (3) the conduct of an adjudicatory proceeding and final decision by the Commission (J.A. 9-10).

There can be no doubt that the Commission ordered the Board to conduct a full adjudicatory hearing on the issue of the restart of TMI-1 utilizing the maximum procedural safeguards available under its rules of practice. The Commission directed that it "be conducted in accordance with the applicable provisions of subpart G of the Commission's Rules of Practice set forth in 10 CFR Part 2" (J.A. 17). The Commission further specifically directed that "[t]he provisions of 10 CFR 2.715a (consolidation of parties), 2.751a (special prehearing conference and order), 2.752 (prehearing conference and order) shall apply to this proceeding."[9] (J.A. 17-18).

---

[7] The short-term actions specified by the Commission included, for example, retraining of reactor operators, improvement of emergency plans, and upgrading of the Emergency Feedwater System.

[8] The long-term actions specified by the Commission included, for example, a failure mode and effects analysis of the Integrated Control System, the implementation of a formal program to assure attention to transient analysis and implementation of procedures for management of small breaks, and more extensive emergency response preparedness.

[9] In addition, the Commission advised the Board to "exercise its authority to seek to ensure that it receives all information necessary to a thorough investigation and resolution of the questions before it" (J.A. 18). Finally, the Commission ordered the Board, upon issuance of the initial decision (or partial initial decision), to certify the record to the Commission itself for final decision (J.A. 18).

In sum, the Commission took every step possible to ensure that the restart of TMI-1 would not endanger the public health and safety and thereby to eliminate any rational bases for psychological distress as a result of the restart. To be sure, NEPA requires that an agency make a "fully informed and well-considered opinion to proceed with a proposal by taking a "hard look" at the pertinent environmental impacts. *North Slope Borough v. Andrus*, 642 F.2d 589, 599 (D.C. Cir. 1980). NEPA thus requires an agency to factor the environmental costs of proceeding with a proposed action into the decision-making process.

The ultimate purpose of the NEPA analysis, however, is to enable the agency to ameliorate or mitigate the cause of the environmental costs by modifying its proposed action. In this case, the Commission has ameliorated the environmental costs of the restart of TMI-1 by requiring the licensee to undertake certain short-term and long-term actions, and by conducting an adjudicatory proceeding to ensure that the plant can be operated without endangering the public health and safety.[10]

Ironically, however, PANE did *not* seek to intervene in the proceeding, at any point, to raise contentions related to the design, management or operation of TMI-1. Yet, numerous contentions could have been raised by PANE in an effort to reduce psychological distress arising from fears of a lack of safety, if one accepts the Board's belief that psychological distress could be mitigated by the imposition of "reasonable, cost-effective conditions on the operation of TMI-1" or through "additional,

---

[10] The restart proceeding lasted from October 15, 1980 through July 9, 1981; the record was reopened from November 11, 1981 through December 10, 1981. The Board agreed to admit "any otherwise allowable contention having a reasonable nexus to the TMI-2 accident." Over 100 separate contentions were proposed and over 175 witnesses testified, producing a transcript of over 26,000 pages. *In the matter of Metropolitan Edison Co., Three Mile Island, Unit No. 1*, 14 N.R.C. 381, 394 (ASLB 1981).

continuous off-site monitoring visible by the residents around the facility" (J.A. 44). PANE never raised the need for any such measures to the Board.

The Commission's rules of practice allow for limited appearances in licensing proceedings to hear non-evidentiary concerns. 10 C.F.R. § 2.715(a) (1982). But PANE never availed itself of one of the most effective means for ameliorating psychological stress noted by the Board—the "opportunity for the public in the vicinity of TMI to express through the NRC hearing process their fears" (J.A. 45). In sum, given the unusually broad scope and extensiveness of the restart proceeding and PANE's failure to participate therein, it is disingenuous for PANE to now argue that the Commission failed to give adequate consideration to the effects of the renewed operation of TMI-1.

B. The Commission Also Provided PANE the Opportunity to Make a Threshold Showing That its Novel Psychological Distress Contention Should Be Considered.

As we have described in our supplementary statement of the case, the procedures employed by the Commission and the Board in the TMI-1 restart proceeding provided PANE the opportunity to make a threshold showing sufficient to trigger the Commission's consideration of its novel psychological distress contention.[11] PANE fell far short of meeting this burden.

In *Vermont Yankee II*, this Court stated that

> while it is true that NEPA places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action, it is

---

[11] The novelty of PANE's contention is that PANE would have the Commission consider psychological distress regardless of whether there is a rational basis for that distress. Indeed, PANE's stated goal—to permanently close down Three Mile Island as a nuclear facility—indicates that PANE is not concerned with whether its psychological distress contention is grounded on an actual or potential threat to the public health and safety.

> still incumbent upon intervenors who wish to participate to structure their participation so that it is meaningful, so that it alerts the agency to the intervenors' position and contentions. This is especially true when the intervenors are requesting the agency to embark upon an exploration of uncharted territory . . .

435 U.S. at 553. The Court upheld the Commission's "threshold test", which required the Commission to consider the novel alternative of energy conservation to a proposed nuclear plant only if the intervenors made a threshold showing that energy conservation alternatives were "reasonably available, would in their aggregate effect curtail demand for electricity to a level at which the proposed facility would not be needed, and were *susceptible of a reasonable degree of proof.*" *Id.* (citations omitted; emphasis added).

The requirement that participants in an agency proceeding make a threshold showing in order to trigger agency action has been upheld by the courts in numerous contexts. For example, in *Georgia-Pacific Corporation v. EPA*, 671 F.2d 1235 (9th Cir. 1982), the court stated "[i]t is well-established that before a hearing is required in a permit application proceeding the applicant must 'meet a threshold burden of tendering evidence suggesting the need for a hearing.'" 671 F.2d at 1241, *quoting Costle v. Pacific Legal Foundation*, 445 U.S. 198, 214 (1980). Similarly, in *Sierra Club v. Sigler*, 532 F.Supp. 1222 (S.D. Tex. 1982), the district court held that an environmental impact statement ("EIS") prepared by the Army Corps of Engineers for the construction of a deepwater port complied with NEPA despite the failure to discuss the possibility of a massive oil spill, noting that:

> plaintiffs have drawn this Court's attention to no method by which the Corps could have informatively predicted the extent to which a "worst case" spill might have been transported into Galveston Bay so as to permit any detailed discussion of the com-

> parative severity of impacts with and without the project. The record before the Court suggests no means through which the FEIS could have conducted such an analysis with accuracy beyond an initial 24-hour period. In other words, the evidence fails to show that such an "analysis" could have been predicated on anything more than guesswork.

Id. at 1234 (footnote omitted).[12]

An examination of the record reveals that the procedures employed by the Commission and the Board in effect required PANE to make a "threshold showing" that its psychological distress contention was both relevant and susceptible to a reasonable degree of proof. The Board, concerned about the difficulty in proving the existence of a causal nexus between future psychological distress and the renewed operation of TMI-1, requested intervenors to submit a preliminary plan for the presentation of evidence including a "discussion of the state of the art of stress psychology and whether it can produce reliable evidence on the subject at hand."[13] After PANE resisted this request, the Board stressed that the preliminary plan

---

[12] *See also Life of the Land v. Brinegar*, 485 F.2d 460, 469 (9th Cir. 1973), *cert. denied*, 416 U.S. 961 (1974), where an EIS complied with NEPA despite the failure to include a study of the demographic effects of a project because there was "no empirical data in the record" supportive of plaintiffs' allegation of the project's effect on the "quality of life"; *National Indian Youth Council v. Watt*, 664 F.2d 220, 226 (10th Cir. 1981), where there was no need for a supplemental EIS because "plaintiffs have failed to identify any specific, significant information" generated after the EIS was prepared: "[t]he issue must be decided on the basis of the record, not by crystal ball gazing"; *New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 99 (1st Cir. 1978), where there was no allegation that the Licensing Board had not accepted testimony on effects of nuclear plant on areas' tourist industry, reviewing court will not dictate the proper number of witnesses or the proper length or depth of a hearing.

[13] Board's Sept. 21, 1979 Order at 24.

was necessary for it to "be informed, if possible, how and if available evidence will justify a psychological stress contention." [14]

The simple fact is that PANE failed to make the requisite threshold showing necessary to trigger the Commission's consideration of its psychological distress contention. The record reveals that PANE never took the opportunity to provide any meaningful definition of that contention. Only after initially resisting the Board's request for a preliminary plan did PANE comply formally. And then, PANE's "evidentiary plan" was nothing more than a tautological restatement of its contention with a suggestion of the use of post-disaster studies, expert witnesses, and the testimony of its members. The plan (a) did not address the basis in the psychological literature for the validity or reliability of studies of the consequences of TMI-2, (b) did not identify who would be PANE's "expert witnesses," (c) did not suggest what the methodology of the PANE "comprehensive study" would be, (d) did not suggest the relevance of the "testimony of individuals concerning their own experiences," [15] and (e) only in its fourth part did it even mention the predictive psychological health impacts of renewed operation of TMI-1. With respect to such predictions, PANE offered only to provide "the conclusion of PANE's [then unidentified] expert witnesses" without any suggestion of the psychological, sociological, or other bases (and related methodology) for such "conclusions" (J.A. 27).

PANE's brief failed to provide any further elucidation of the state of the art of stress psychology. In fact,

---

[14] Board's Oct. 16, 1979 Order at 4.

[15] In its certification to the Commission, the Board emphatically rejected the relevance of such idiosyncratic statements noting that "a parade of witnesses describing their personal experiences during the TMI 2 accident and their concerns about restarting TMI 1 . . . would soon become cumulative and, in any event, would be of doubtful value" (J.A. 46).

PANE's brief did *not* address in any way the ability of psychology to measure, or predict, potential fears or distress that may result from a future event. Rather, it focused on the ability of psychology to measure psychological distress among a population as the result of a traumatic occurrence; the brief is devoid of any discussion of the predictive validity of such studies. Yet, the occurrence of psychological distress as a result of the restart of TMI-1 is the basis for PANE's contention, not the degree to which its members suffered psychological distress from the accident at TMI-2. In short, PANE failed to provide any bases for the relevance of its contention to the restart proceeding or its susceptibility to a reasonable degree of proof.

II. THE COURT OF APPEALS ERRED IN REQUIRING THE COMMISSION TO REDETERMINE THE ADMISSIBILITY OF PANE'S PSYCHOLOGICAL DISTRESS CONTENTION.

Stripped of all its trimmings, this case is simply another attempt by the D.C. Circuit to sidestep the mandate of *Vermont Yankee II*. The record demonstrates that the Commission employed the full range of its procedural rules to ensure that all rational bases for psychological distress as a result of the restart of TMI-1 were eliminated. To determine the legal relevancy of PANE's psychological distress contention to the proceeding, absent technical bases for those fears, the Commission even gave PANE the opportunity to present evidence on the relevance of its contention and the state of the art of stress psychology.

The court below did not find that the Commission's procedures were inadequate nor that the Commission failed to adhere to them. Nevertheless, the court of appeals remanded the record for a "study of potential psychological health effects and for a decision whether a supplemental EIS is necessary" (Pet. App. 28a). It is manifest that the Commission has already performed the analysis required by the court of appeals.

In *Vermont Yankee II*, this Court unequivocally stated that

> Absent constitutional constraints or extremely compelling circumstances 'the administrative agencies should be free to fashion their own rules of procedure and to pursue methods of inquiry capable of permitting them to discharge their multitudinous duties.'

435 U.S. at 543-44 (citations omitted). This Court further stated that although NEPA "has altered slightly the statutory balance," *Id.* at 551, it "cannot serve as a basis for a substantial revision of the carefully constructed procedural specifications of the APA." *Id.* at 548. Finally, the Court admonished the D.C. Circuit that nuclear policy questions are "appropriately resolved in Congress and in the state legislatures [and] are *not* subject to reexamination in the federal courts under the guise of judicial review of agency action." *Id.* at 558 (emphasis in original). The decision below ignores each of these basic principles of judicial review of agency action.

In *Vermont Yankee II*, this Court chided the D.C. Circuit for departing from the "very basic tenet of administrative law that agencies should be free to fashion their own rules of procedures." *Id.* at 544. In subsequent cases, the court of appeals has cited this Court's decisions in both *Vermont Yankee II* and *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223 (1980), in support of the limited role of the Federal courts in the review of agency actions, especially in the NEPA context.[16]

---

[16] *See, e.g., North Slope Borough*, 642 F.2d at 599; *see also Natural Resources Defense Council, Inc. v. SEC*, 606 F.2d 1031, 1044, 1048-49 (D.C. Cir. 1979). In fact, the D.C. Circuit recently stated that where an agency's decision is "fully informed and well considered," *Vermont Yankee II*, 435 U.S. at 558, reversal by a reviewing court constitutes "an unjustifiable intrusion into the administrative process." *Cabinet Mountains Wilderness/Scotchman's*

A comparison of the court of appeals' January 7, 1982 Judgment with its April 2, 1982 Amended Judgment indicates that the court, cognizant of the intrusive nature of its earlier judgment into the Commission's procedures, attempted to suggest that its decision complied with the mandate of *Vermont Yankee II*. In the Initial Judgment, the court of appeals ordered the Commission to "prepare an environmental assessment regarding the effects of the proposed restart of the nuclear facility at Three Mile Island Unit One (TMI-1) on the psychological health of neighboring residents and on the well-being of the surrounding communities" (Pet. App. 105a-106a), in order to decide if a full EIS was required (Pet. App. 106a).

In the April 2, 1982 Amended Judgment, the court of appeals ordered the Commission to determine whether, since the preparation of the original EIS for TMI-1, "significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility" and, if so, to prepare a supplemental EIS (Pet. App. 103a-104a). In further formal deference to *Vermont Yankee II*, however, the court stated that "[t]he Commission may choose the procedures by which it makes this determination" (Pet. App. 104a).

Thus, despite the fact that the Commission had already *chosen* and *employed* procedures to determine the relevancy of PANE's psychological distress contentions, which the court did not find to be arbitrary or capricious, the court of appeals would have the Commission reconsider the issue, and seek *new* evidence relevant thereto. Although the court of appeals intentionally did not indicate whether the Commission should employ different or additional procedures to make this determination, the message of the order is clear—reconsider PANE's contention and come up with a different result.

Peak Grizzly Bears v. Peterson, 685 F.2d 678, 684 (D.C. Cir. 1982).

As the D.C. Circuit well knows, the proper role of a court in reviewing agency compliance with NEPA is beyond dispute. "[O]nce an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to insure that the agency has considered the environmental consequences; it cannot 'interject itself within the area of discretion of the executive as to the choice of action to be taken.'" *Stryckers Bay*, 444 U.S. at 227-28 *quoting Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976).

Moreover, the rationality of an agency's decision to proceed with a proposed action—in this case the renewed operation of TMI-1—must be judged on the basis of the record before the agency and the facts then available to it. *Vermont Yankee II*, 435 U.S. at 554-55. Obviously, there will always be a gap between the time the administrative record is closed and the time the administrative decision is promulgated. *Id.* However, agency time and resources are short; there must be a reasonable limit to the agency's responsibility to admit and consider evidence, otherwise "there would be little hope that the administrative process could ever be consummated in an order that would not be subject to reopening." *ICC v. Jersey City*, 322 U.S. 503, 514 (1944) *quoted in Vermont Yankee II*, 435 U.S. at 554-55. By requiring the Commission to reopen the record, seek *new* facts and circumstances, and to redetermine the relevance of PANE's psychological distress contention, the court of appeals has violated the mandate of *Vermont Yankee II*.

III. THERE IS NO SCIENTIFICALLY VALID "EVIDENCE" RELEVANT TO AN ADJUDICATORY PROCEEDING FOR THE NEPA CONSIDERATION OF THE MENTAL HEALTH EFFECTS OF THE RESTART OF TMI-1.

The premise for the consideration of even a well-articulated contention in a nuclear licensing proceeding is that it be "susceptible of a reasonable degree of proof." *Vermont Yankee II*, 435 U.S. at 533.

If this Court should find the contention to have been adequately articulated, *and not* to have been capable of inclusion in the Commission's consideration of objective causes for fear, one must then ask whether the contention presents a theory which has been medically recognized or can be scientifically validated so that it is admissible in an adjudicatory proceeding. As this Court has previously said: "When those trained in the respective disciplines of medicine, philosophy, and theology are unable to arrive at any consensus, the judiciary, at this point in the development of man's knowledge, is not in a position to speculate as to the answer." *Roe v. Wade*, 410 U.S. 113, 159 (1973).

In order to determine the admissibility of the contention, we (1) summarize the contention as stated by PANE initially and then developed by the court of appeals and (2) address the elements of its formulations in the light of the medical and scientific literature.

A. The Contention

PANE contends that the TMI-2 incident has (a) "impaired the health and sense of well being" of its members and others (b) as evidenced by "their feelings of increased anxiety, tension and fear, a sense of helplessness and such physical disorders as skin rashes, aggravated ulcers, and skeletal and muscular problems" (Pet. App. 115a). It then characterizes these conditions as "manifestations of psychological distress" similar to "the aftermath of other disasters" and states that the possibility of the restart of TMI-1 "severely aggravates these problems." [17] The conclusion is that even the continued "possibility" of restart, much less restart itself, makes its

---

[17] In its brief, PANE identified this condition as including Post-Traumatic Stress Disorder as it was about to be adopted by the American Psychiatric Association in DSM-III. *Certification* at A-101 and A-102. And still later in its brief to the court of appeals its characterized the condition as "severe psychological distress" (Pet. App. 10a).

members and others "unable to resolve and recover from the trauma."

The lower court's concept of the contention, as it matured in litigation, is slightly different: The majority below appears to find that an EIS is required only in situations involving "severe psychological effects" (that is, "psychological effects [rising] to the level of psychological health effects") and that at least one class of such "psychological health effects" may be defined as "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe" [18] (Pet. App. 16a-17a).

These formulations may be summarized as follows: The TMI-2 incident constituted (1) a disaster which (2) was a severe stressor which (3) had a negative impact on the surrounding residents causing (4) post-traumatic stress disorders with (5) accompanying physical symptoms. Further, (6) PANE's studies and expert testimony can (7) predict the aggravation of this mental disorder and its resultant physical disorders due to restart or even the possibility of restart.

B. Analysis in Light of the Scientific Literature

Disaster: Is the TMI-2 incident properly characterized as a "disaster" as that term is used in psychological literature?

---

[18] There is language in the majority opinion which some read to limit this NEPA inquiry further to this single reactor or perhaps even this single point of time in the reactor's licensing career: "Americans have never before experienced the psychological aftermath of a major accident at a nuclear power plant, one that aroused fears of a nuclear core meltdown and led to mass evacuation from the surrounding communities" (Pet. App. 13a-14a). We, however, agree with Judge Wilkey that the decision would not be so limited (Pet. App. 59a). We also note that evacuation due to natural disasters (*e.g.*, hurricanes) and industrial pollution (*e.g.*, Love Canal) are familiar events in American society today. For example, just recently 20,000 people were evacuated before dawn *from a five-mile radius* around the explosion of an underground chemical storage tank in Destrehan, Louisiana. N.Y. Times, Dec. 12, 1982, at 30, col. 1.

In psychology, the term "disaster" has ordinarily been applied to events such as floods, earthquakes, tsunami, the nuclear bombing of Nagasaki and Hiroshima, the 1943 Coconut Grove Nightclub fire and the Buffalo Creek Flood.[19]

But what was the nature of the TMI-2 incident? (For Judge Wilkey's view, see Pet. App. 46a n.37.) On March 28, 1979, TMI-2 suffered internal damage. As a result of a misunderstanding of the internal condition of the reactor, a partial voluntary evacuation within a five-mile radius of the plant ensued. There was no loss of life or other physical injury to persons and there was no damage to any property outside of the reactor itself. In fact, the short-term stress resulting from the incident has been attributed by some responsible authorities to misunderstanding by the media and the dissemination of misinformation through the media.[20]

However, regardless of whether one identifies the cause of the stress as the incident itself or the mischaracterization of it, there is no doubt that some level of fear occurred in some people, at least until a correct characterization of the incident was disseminated. Perhaps a better characterization of the event would be as a "trau-

---

[19] See Singer, *An Introduction to Disaster: Some Considerations of a Psychological Nature*, 53 AVIATION, SPACE AND ENVIRONMENTAL MEDICINE No. 3 at 245 (March 1982) and references therein; ERIKSON, EVERYTHING IN ITS PATH, *infra* note 21.

[20] Report of the President's Commission on THE ACCIDENT AT THREE MILE ISLAND, *The Need For Change: The Legacy of TMI* 58, 78-79 (1979). Also, a recent study compared the attitudes toward nuclear energy of scientists and various classifications of journalists. It may not be surprising that the results indicate a favorable attitude (in declining order) on the part of nuclear experts, energy experts, all scientists, science journalists and "prestige press journalists," with TV reporters and producers and public TV journalists possessing negative attitudes. Rothman and Lichter, *The Nuclear Energy Debate: Scientists, The Media and the Public*, PUBLIC OPINION 47, 51 (Aug./Sept. 1982).

matic event"[21] or, in the American Psychiatric Association's technical terminology, a "stressor."

Severe Stress: Grasping what stress (and, in turn, "severe stress") means in a psychiatric sense is extraordinarily difficult. As one authority has written, "the single most remarkable historical fact concerning the term 'stress' is its persistent, wide-spread usage in biology and medicine in spite of almost chaotic disagreement over its definition.[22] As these things work, the most commonly accepted definition currently is *any* "life event," meaning *any* change in one's state. This is best illustrated by examination of the classification of "stressors" in the AMERICAN PSYCHIATRIC ASSOCIATION, QUICK REFERENCE TO THE DIAGNOSTIC CRITERIA FROM DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, 3d ed. (1980) (*"Quick Reference"*).

DSM-III provides for an impressionistic coding of the overall severity of a "stressor" by a clinician in eight categories with examples, as follows: "none (no apparent

---

[21] The definition of "trauma" is becoming so diffuse as to be empty of any real meaning. As Dr. Kai Erickson has written:

> One does not need to visit the homes of the wretched to find symptoms of trauma, for there are ample indications that *modern life itself can become a principal cause of traumatic reactions* . . . if it makes sense to assume that the processes of modernization often breed their own forms of chronic disaster; then it is reasonable to wonder whether traumatization is apt to become an increasingly common experience in human life.

ERIKSON, EVERYTHING IN ITS PATH: DESTRUCTION OF COMMUNITY IN THE BUFFALO CREEK FLOOD 256 (1976) (emphasis added).

[22] Mason, *A Historical View of the Stress Field: Part One* 1 JOURNAL OF HUMAN STRESS No. 1 at 6 (1975). And another authority has written: "Stress research is in crisis. Methodology lacks refinement; therefore, validity is often not accepted. Its change and use of findings between practitioners in the medical model and those in the psychological and social sciences is the exception rather than the rule . . . and what consensus may be possible is not adequately disseminated for beneficial application beyond home base." Rose, *Editorial*, 3 JOURNAL OF HUMAN STRESS No. 1 at 3 (1977).

psychosocial stressor), minimal (minor violation of the law; small bank loan), mild (argument with neighbor; change in work hours), moderate (new career; death of close friend; pregnancy), *severe* (*serious illness in self or family; major financial loss; marital separation; birth of child*), extreme (death of close relative; divorce), catastrophic (concentration camp experience; devastating natural disaster), and unspecified (no information or not applicable)." *Quick Reference* at 14-15 (emphasis added).

Thus, if one is willing to ignore the recognized controversy over what stress is and accept the current classifications of stress by the American Psychiatric Association, PANE and the court below have agreed that the stress caused by the TMI-2 incident is equivalent to the stress caused by a negative event of the level of a serious illness in oneself or family, or a positive event such as the birth of a child. Thus, placed among the technical gradations of stressors, the use of "severe" may be seen in perspective, referring not only to the TMI-2 incident but also to other life events shared by all of us.

Moreover, both PANE and the lower court ignore the fact that many experts believe stress can have positive effects. In fact, numerous studies following the occurrence of a disaster have concluded that there was an overall beneficial effect on the exposed population. *See, e.g.*, Wilson, *Disaster and Mental Health* contained in BAKER & CHAPMAN, MAN AND SOCIETY IN DISASTER (1962) at 132-33. ("There is a good bit of evidence that disaster experience may constitute for many people an 'optimal stress' which promotes active mental harmony rather than psychiatric disorder.")[23]

---

[23] See also BARTON, COMMUNITIES IN DISASTER: A SOCIOLOGICAL ANALYSIS OF COLLECTIVE STRESS SITUATIONS (1970); Dynes & Quarentelli, *The Family and Community Context of Individual Reactions to Disaster* in PARAD, RESNICK & PARAD, EMERGENCY AND DISASTER MANAGEMENT: A MENTAL HEALTH SOURCE BOOK (1976); TAYLOR, DELIVERY OF MENTAL HEALTH SERVICES IN DISASTER: THE XENIA TORNADO (Disaster Research Center, Ohio State University 1976);

Post-Traumatic Stress Disorder: PANE has relied on, and the court below apparently accepted, the fact that post-traumatic psychological stress appears in AMERICAN PSYCHIATRIC ASSOCIATION, THE DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, 3d ed. (1980) ("DSM-III") as evidence that it is a recognized form of mental illness. However, DSM-III states that a *premise* for application of its diagnostic criteria "is an inference that there is a behavioral, psychological, or biological disfunction, and that the disturbance is not only in the relationship between the individual and society." DSM-III at 6. Thus, the manual is to be used to diagnose an individual *who has already been found to have a mental disorder*, not to determine the existence of mental illness.[24]

WALKER, FRAIZE, GORDON & JOHNSON, SUMMARY REPORT OF THE WORKSHOP ON PSYCHOLOGICAL STRESS ASSOCIATED WITH THE PROPOSED RESTART OF THREE MILE ISLAND, UNIT 1 (NUREG/CP-0026/MTR-82W26, April 1982).

[24] The lack of necessary correlation between the classification of a condition within DSM-III and "mental illness" may be illustrated by the following conditions which are also classified within DSM-III:

(a) 307.30—Atypical stereotyped movement disorder. "This category is for conditions such as head banging, rocking, repetitive hand movements consisting of quick, rhythmic, small hand rotations or repetitive voluntary movements that typically involve the fingers or arms. These disorders are distinguishable from tics in that they consist of voluntary movements and are not spasmodic." *Quick Reference* at 47-48. Woe to the finger tappers!

(b) 307.00—Stuttering. "Frequent repetitions or prolongations of sounds, syllables, or words or frequent, unusual hesitations and pauses which disrupt the rhythmic flow of speech." *Quick Reference* at 48.

Also, DSM-III identifies and includes a variety of "conditions" "where there is a need to note the reason for contact with the mental care system" although "no mental disorder has been found" or "the diagnostic evaluation has not been adequate to determine the presence or absence of a mental disorder." *Quick Reference* at 189. An example is V62.81—Other Interpersonal Problem. "This category can be used when a focus of attention or treatment is an

Further, the TMI-2 incident was not of the character or severity indicated by the American Psychiatric Association as giving rise to a post-traumatic stress disorder,[25] but there is significant disagreement among the experts whether even those indicated stressors cause, as opposed to trigger, a post-traumatic stress disorder.

Physical Symptoms: Not only does DSM-III not identify physical symptoms (other than headaches and vertigo) as features possibly associated with post-traumatic stress disorder, but the literature indicates only the most tentative relationship between stress and physical illness.[26]

---

interpersonal problem (other than marital or parent-child) that is apparently not due to a mental disorder of the individual who is being evaluated. Examples are difficulties with co-workers, or with romantic partners." *Quick Reference* at 193.

[25] In its description of stressors which may give rise to post-traumatic stress disorder, the American Psychiatric Association states "the trauma may be experienced alone (rape or assault) or in the company of groups of people (military combat). Stressors producing this disorder include natural disasters (floods, earthquakes), accidental man-made disasters (car accidents with serious physical injury, airplane crashes, large fires) or deliberate man-made disasters (bombing, torture, death camps). Some stressors frequently produce the disorder (*e.g.*, torture) and others produce it only occasionally (*e.g.*, car accidents). Frequently there is a concomitant physical component to the trauma which may even involve direct damage to the central nervous system (*e.g.*, malnutrition, head trauma)." DSM-III at 236.

[26] Contrary to the assurances offered by *amicus curiae* American Psychological Association in its brief opposing the grant of a writ of certiorari ("*Phychological Association Brief*") at 11 n.17, the literature teaches that our knowledge of the relationship between life events or changes (whether positive or negative) and physical illness is an area where conclusions are quite questionable and subject to many mediating variables. . . the enormously difficult task awaits us of filling in the crucial steps in an all-encompassing model which takes into account not only environmental variables but the sociological, psychological, and physiological characteristics of the individual. We see a bright future for this field of investigation. It is truly a field in which the efforts of sociologists, psychologists,

As Dr. Antonovsky has written: "There seems to be no evidence that the life crises undoubtedly posed by disaster situations had either an immediate or even a delayed deleterious impact on health. If anything the contrary might even be true." [27]

To illustrate the absence of an ability to identify stress as the cause of physical disorder, we refer to a panel discussion of what is *not known* scientifically about such an apparently obvious relationship between stress and hypertension. In its summary and conclusions, the panel stated: "It was predictable that there would be a profusion of disparate issues in a session assembled to analyze why research had made so little progress in illucidating the role of stress in hypertension." [28] In its Message, the panel acknowledged not only the absence of "hard facts" in this area, but also the absence of an agreed methodology: "It became clear that the crisis in stress research on hypertension has come about in large part as a result of lack of communication and interaction among disciplines which are all necessarily involved in formulating appropriate questions and seeking the same ultimate understanding of the puzzles that surround hypertension." *Id.* at 22.

---

psychiatrists, physiologists, endocrinologists, and pathologists will be necessary to provide a complete picture of the precise interrelationships between the vicissitudes of life and sickness." Rahe and Arthur, *Life Change and Illness Studies*, 4 JOURNAL OF HUMAN STRESS No. 1 at 3, 13 (March 1978); *see also, e.g., Bieliauskas, Life Events, 17-OHCS Measures, and Psychological Defensiveness in Relation to Aid-seeking*, 6 JOURNAL OF HUMAN STRESS No. 1 at 28 (March 1980); Fairbank and Hough, *Life Event Classification and the Event-Illness Relationship*, 5 JOURNAL OF HUMAN STRESS No. 3 at 41 (1979); STRESSFUL LIFE EVENTS: THEIR NATURE AND EFFECTS (Dohrenwend and Dohrenwend eds. 1973).

[27] Antonovsky, *Conceptual and Methodological Problems in the Study of Resistance Resources and Stressful Life Events in* STRESSFUL LIFE EVENTS: THEIR NATURE AND EFFECTS, Chapter 15 at 246 (Dohrenwend and Dohrenwend eds. 1969).

[28] *Session I: The Role of Stress in Hypertension*, 5 JOURNAL OF HUMAN STRESS No. 2 at 7, 20 (June 1978).

If the psychiatrists and experts from the other disciplines admit the current absence of hard facts and methodology to scientifically and medically assess the relationship between stress and hypertension, *a fortiori*, hard facts and methodology are absent as to the relationship between stress and the more exotic physical symptoms alleged by PANE.

PANE's Proffered "Studies and Expert Testimony": Although PANE's evidentiary plan mentioned proposed studies and expert testimony only in conclusory fashion, some light may be shed on the subject from PANE's subsequent request for financial assistance.[29] PANE's Request for Financial Assistance To Support Intervention on the Issues of Psychological Distress (NRC Docket No. 50-289 (Restart) Nov. 29, 1979).

Therein it proposed an annual budget of $90,472 including $28,252 for operating expenses (consisting primarily of the expenses of printing its newsletter, holding public meetings and producing "buttons, T-shirts," etc.); $10,000 as "PANE education expenses" (also de-

---

[29] We do not address PANE's proffer of a "parade of witnesses describing their personal experiences during the TMI-2 accident and their concern about restarting TMI-1" (J.A. 46). We agree with the Board that "[t]his approach would soon become cumulative and, in any event, would be of doubtful value." *Id.*

Further, the American Psychological Association's indication that the Symptom Checklist—90R and the Minnesota Multiphasic Personality Inventory are objective instruments which would be of value here is subject to considerable doubt. *Psychological Association Brief* at 9-10. The doubt arises from the fact that these are *self-administered* tests easily capable of manipulation by the person taking the test. As Dr. Stanislav V. Kasl recently observed: "when data are collected under special circumstances—such as when a segment of the community is organizing itself to protest environmental hazards and prepare for legal action—*then all bets are off regarding the validity of such data.*" Kasl, *Methods to Evaluate Behavioral Effects of Environmental Exposure* prepared for the THIRD ANNUAL SYMPOSIUM ON ENVIRONMENTAL EPIDEMIOLOGY (April 26-28, 1982) (emphasis added).

scribed as the cost of a "media consultant"), and $52,220 in "intervention expenses." *Id.* at Att. 2.

The intervention expenses (to be funded by the Commission) included $28,560 for legal fees and expenses relating to an expected three weeks of hearings, and $23,660 for witness fees and expenses. Within this amount, PANE allocated $20,000 to expert witness fees for Dr. Kai T. Erikson and Dr. Robert Lifton (20 working days each at $300 per day), and for Dr. Edward Walsh "and colleague" (20 working days each at $200 per day). *Id.*

This implies that PANE expected to be able to answer through 80-man-days of work (presumably including hearing days) not only the questions of methodology but also, subsequently, of fact with which the medical and other professions have been struggling for centuries.

In this connection, PANE's choice of experts is also interesting. Dr. Lifton is on the record as (a) seeing no difference between nuclear warfare and nuclear power, (b) promoting the concept that the protests against nuclear power express the "wisdom of the body" superseding the rational assessments of science, and finally, (c) *fearing* (in 1976) that the occurrence of a nuclear accident might be a positive influence on society's acceptance of nuclear power.[30] Also, it is not clear that Dr. Walsh

---

[30] Almost three years before the TMI-2 incident, Dr. Lifton published an article entitled *Nuclear Energy and the Wisdom of the Body* in which he made the following statements: (1) "Hiroshima is my image behind nuclear power issues and I believe it is the image shared by all of us" (at 16); (2) "Psychiatrists are usually called upon to say that the resistance to . . . nuclear energy, is 'irrational' and 'emotional.' I believe the uneasiness related to both nuclear weapons and power as expressed by mass protest movements throughout the world represents the most fundamental, primal fears about the integrity of the human body, as threatened by the invisible poison of irradiation. It is an expression of . . . 'the wisdom of the body'" (at 18); (3) "Even some scientists who have been critical of the nuclear arms race are enthusiastic about nuclear power. Here they perhaps share with many the feeling that the nuclear deity

would still be acceptable to PANE as a witness given that he subsequently published a study which had as one of its conclusions that "public hearing processes, . . ., may become more an instrument of protest mobilization than of social control, especially when organized protest ideology is available." [31] For Dr. Erikson's view, see note 21 *supra*.

Finally, we address the Psychological Association Brief with respect to the available methodology and "hard facts." The most striking feature of that brief is its professionally tentative character. For example, it states "the *possibility* that psychological stress at TMI is, in fact, measurable, is *quite substantial*." *Psychological Association Brief* at 9 (emphasis added). This compounded

---

should be capable of unlimited creation as well as apocalyptic destruction. Scientists who have worked on the bomb have a particular inclination to seek something constructive deriving from their efforts, something that can serve mankind" (at 20); and (4) "Some people have suggested that one accident or one explosion might be necessary to remind the world of the necessity to control the nuclear dangers in our midst. Such crises, however, may have precisely the opposite effect . . . publicizing the horrors alone can have the impact of enhancing the very process we want to interrupt. We need to disseminate information that conveys the full danger of the human effects of nuclear technology and that provides possible directions for policy in action" (at 20). 32 THE BULLETIN OF THE ATOMIC SCIENTISTS No. 7 at 16 (Sept. 1976). One can only wonder what Dr. Lifton's reaction would be to the survey *in Japan* in 1975 which resulted in a finding that 48 percent of the people expressed some fears of atomic energy but *70 percent* took the need for nuclear power for granted. Yamada and Ohori, *Public Acceptance of Nuclear Power Development in Japan*, PROCEEDINGS OF INTERNATIONAL CONFERENCE ON NUCLEAR POWER at 185-95 (IAEA, May 2-13, 1977).

[31] In a paper presented to the American Sociological Association in August 1980, Dr. Walsh considered the rapid growth and development of social movement organizations around TMI after the 1979 incident for the purpose of assessing and refining theories on social movements. Walsh, *Resource Mobilization and Citizen Protests in Communities Around Three Mile Island*, 29 SOCIAL PROBLEMS: No. 1 at 18-19 (Oct. 1981).

qualification tells us of the psychologists' hopes for the future, an admirable quality of any advancing discipline, but it does not tell us of methods and facts currently available.

Predictability: Before we can attain the ability to predict a relationship among life events, stress, mental disorders and physical disorders, we must at least be able to understand existing relationships, if any. The authorities cited above indicate the many stages through which we must pass before that ability can, if ever, be attained.[32] The statements by the American Psychological Association that "it is also *possible* to examine . . . anticipatory anxieties in *individual* cases" and that "efforts have been made to predict, . . ., what additional stress would be caused by restarting TMI-1" do not contradict this analysis of the state-of-the-art.[33]

C. The Legal and Political Inferences

Above we have parsed PANE's contention and then presented examples from the medical and interdisciplinary literature to illustrate the extraordinary degree of uncertainty admitted by the experts to *each element* of the contention.[34] The legal inference is that any one of these uncertainties (much less the compound uncertainty of the chain) would make the contention inadmissible in an adjudicatory proceeding. *See, e.g., Roe v. Wade*, 410 U.S. 113, 119 (1973).

The Nation has decided by repeated Acts of Congress to pursue the peaceful uses of atomic energy and has

---

[32] *See, e.g.*, authorities cited in note 26 *supra*.

[33] *Psychological Association Brief* at 10 and 15-16, respectively (emphasis added). The first statement addresses a present not a future condition and the latter addresses only "efforts" without any judgment as to confidence in the methodology, much less the results.

[34] Our analysis of the state-of-the-art in the various scientific and sociological areas discussed above does not reflect a nihilistic attitude toward such inquiries, but is presented only to demonstrate their current inappropriateness to the adjudicatory process.

delegated to the Commission the limited technical task of ensuring that licensed activities are conducted with reasonable assurance to the public health and safety. If PANE wishes to pursue such political arguments (*see* 28 *supra*) in the legislative or electoral forums of our society, it is free to do so; but fear itself has no place in the adjudication of safety issues interstitial to a program already authorized by Congress. *Vermont Yankee II*, 435 U.S. at 558.

Finally, we express our most basic concern over any attempt to elevate fear itself over reason in our society's decisionmaking functions. In those few instances where this has occured, we have come to regret it. *See, e.g., Korematsu v. United States*, 323 U.S. 214 (1944).

CONCLUSION

For the reasons stated above, the Amended Judgment of the court of appeals should be reversed, and the case should be remanded with instructions to dismiss PANE's Petition for Review.

Respectfully submitted,

JAMES P. MCGRANERY, JR.
Counsel of Record
WILLIAM A. CARNAHAN
MINDY A. BUREN
LEBOEUF, LAMB, LEIBY & MACRAE
1333 New Hampshire Ave., N.W.
Suite 1100
Washington, D.C. 20036
(202) 457-7500
Attorneys for Amicus Curiae

December 16, 1982

Office-Supreme Court, U.S.
FILED
JAN 29 1983
ALEXANDER L. STEVAS,
CLERK

No. 81-2399
No. 82-358

IN THE

Supreme Court of the United States

OCTOBER TERM 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to The United States Court of Appeals for The District of Columbia Circuit

BRIEF FOR THE UNION OF CONCERNED SCIENTISTS AS *AMICUS CURIAE* IN SUPPORT OF RESPONDENTS

ELLYN R. WEISS
Counsel of Record
General Counsel
UNION OF CONCERNED SCIENTISTS

HARMON AND WEISS
1725 I Street, N.W.
Washington, D.C. 20006
(202) 833-9070
Attorney for Amicus Curiae

January 29, 1983

PARAGON PRESS, WASHINGTON—6304 N. OAK STREET, ARLINGTON, VA 22209—(703) 522-6666

QUESTION PRESENTED

Whether the National Environmental Policy Act of 1969 requires the Nuclear Regulatory Commission to consider the impact of reopening Three Mile Island Unit No. 1 on the psychological health of surrounding residents where (1) the impact is alleged to involve medically recognized damage to human psychological health in an area where such damage has already occurred as a result of the accident at Three Mile Island Unit No.2, (2) the health damage would be directly caused by the alteration of the human environment of the area by the restart of Unit 1, and (3) the health damage is directly related to the potential for physical harm from a nuclear accident should the restart Unit No. 1 be allowed?

TABLE OF CONTENTS

	Page
QUESTIONS PRESENTED	i
TABLE OF CONTENTS	iii
TABLE OF AUTHORITIES	iv
PRELIMINARY STATEMENT	1
INTEREST OF *AMICUS CURIAE*	2
SUMMARY OF ARGUMENT	3
ARGUMENT	6
THE EVENTS OF MARCH 28-30 POSED A SERIOUS THREAT TO THE HEALTH AND SAFETY OF THE PEOPLE SURROUNDING THREE MILE ISLAND	6
CONCLUSION	13

TABLE OF AUTHORITIES

	Pages
CASES:	
First National Bank of Chicago v. *Richardson*, 484 F.2d 1369 (7th Cir. 1973)	5
Hanley v. *Kleindienst*, 471 F.2d 823 (2d Cir. 1972)	5
Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), ALAB-705 (Dec. 13, 1982)	6
STATUTES:	
National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq.*	5
MISCELLANEOUS:	
Benjamin, *Nuclear Study Raises Estimates of Accident Tolls*, Washington Post, Nov. 1, 1982 at A1.	4
D. Ford, *Three Mile Island, Thirty Minutes to Meltdown* (Penguin Books 1982)	13
Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969, 45 Fed. Reg. 40,101 (June 13, 1980)	6,13
Overview of the Reactor Safety Consequence Model, NUREG-0340 (1977)	4
Proposed Annex to 10 CFR Part 50, Appendix D, 36 Fed. Reg. 22,851 (1971)	6
Reactor Safety Study: An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants, WASH-1400 (Oct. 1975)	4
Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI (Oct. 1979)	3,6,9,12
Staff Reports to the President's Commission on the Accident at Three Mile Island, Reports of the Technical Assessment Task Force, Vol. II (Oct. 1979)	11
Three Mile Island, A Report to the Commissioners and the Public, Nuclear Regulatory Commission Special Inquiry Group (Jan. 1980)	*passim*

IN THE

Supreme Court of the United States

OCTOBER TERM 1982

METROPOLITAN EDISON COMPANY, JERSEY CENTRAL POWER & LIGHT COMPANY AND PENNSYLVANIA ELECTRIC COMPANY,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,
Petitioners,

v.

PEOPLE AGAINST NUCLEAR ENERGY, *et al.*,
Respondents.

On Writs of Certiorari to
The United States Court of Appeals for
The District of Columbia Circuit

BRIEF FOR THE UNION OF CONCERNED SCIENTISTS AS *AMICUS CURIAE* IN SUPPORT OF RESPONDENTS

PRELIMINARY STATEMENT

The Union of Concerned Scientists has received the consent of the parties to appear as *amicus curiae* in this proceeding in support of the position of Respondents, People Against Nuclear Energy. Letters confirming consent have been filed with the Court.

INTEREST OF *AMICUS CURIAE*

The Union of Concerned Scientists (UCS) began in 1969 as a group composed primarily of faculty members in science and engineering disciplines at the Massachusetts Institute of Technology. UCS has become a national organization supported by the contributions of some 100,000 citizens, with professional staff in Cambridge, Massachusetts and Washington, D.C. UCS's work includes educational activities, participation in adjudicatory and rulemaking proceedings, legislative representation and litigation, all of which are supported by independent technical research and analysis conducted by UCS's staff and outside professional advisors. The issues of primary concern to UCS are energy policy, nuclear safety and arms control. UCS's goals are the adoption of a safe and sensible course for America's energy program and a world secure from the threat of nuclear war.

The Union of Concerned Scientists has a record of achievement. Its participation in ground-breaking Atomic Energy Commission proceedings on emergency core cooling systems in 1971-72 led to the first serious public examination of nuclear power plant safety.

In 1980, following up on the lessons learned from the fire at the Browns Ferry Nuclear Plant, UCS legal and technical work culminated in the adoption by NRC of industry-wide standards for the protection of nuclear plants from threats posed by fire and other accidents. UCS has participated in a variety of other AEC and NRC proceedings, including the ongoing proceedings to determine whether and under what conditions Three Mile Island Unit I should be permitted to operate.

UCS has published many technical books and studies covering topics such as U.S. energy options, radioactive waste management, techniques for verification of arms control agreements and analyses of alternative national security policies.

The Chairman of the UCS Board of Directors is Dr. Henry W. Kendall, professor of physics, Massachusetts Institute of Technology. Serving with him on the Board are Dr. James Fay,

MIT professor of mechanical engineering; Dr. Kurt Gottfried, Cornell University professor of physics; Leonard Meeker, Esq., former Legal Advisor, U.S. Department of State and former U.S. Ambassador to Romania; Dr. Herbert Scoville, Jr., former Deputy Director of the Central Intelligence Agency and currently President, Arms Control Association; and Richard Wright, executive vice-president, Chronar Corporation and formerly Congressional Liaison, U.S. Department of Energy.

In the case before the Court, the Union of Concerned Scientists seeks to present facts showing that, contrary to the assertions of the Petitioners, the accident at Three Mile Island Unit 2 posed a grave risk to the health and safety of the surrounding population. We do so out of the conviction that denial of the nature and magnitude of that risk increases the chance that it will be repeated and in the knowledge that, without perseverance and dedication to improvement, the consequences on the next occasion could be far worse.

SUMMARY OF ARGUMENT

Most of the briefs of the Petitioners and *amici* in their support before this Court present the argument, either explicitly or through the calculated and repeated use of words such as "fears" and "groundless fears," (Brief for Petitioners Metropolitan Edison Company *et al.* at 4) that the accident at Three Mile Island, Unit 2 ("TMI-2") posed little or no real threat to the people surrounding that plant. Petitioner Metropolitan Edison *et al.* asserts that "it is fair to say that there was no actual danger to the public and that the mental stress was caused primarily by confusion and misinterpretation." *Id.* It is the intention of the Union of Concerned Scientists to show that this *post hoc* characterization of the events of March 28-30, 1979, is grossly misleading. During the first day of the accident, a remarkable series of equipment failures, design errors and human blunders led to uncovery of the reactor core and total blockage of coolant for prolonged periods of time. Both the President's Commission on the Accident at Three Mile Island (the "Kemeny Commission") and the NRC's Special Inquiry Group (the "Rogovin Report") have concluded upon analysis

that TMI-2 was within an hour or less from an irreversible meltdown of the reactor core and, perhaps most significantly, that those in charge of operating the plant did not realize that the core was not being cooled and had, therefore, no understanding of the gravity of the danger. Under these circumstances, the risk to the public was palpable; a few more equipment failures or human miscalculations would have led to meltdown. The consequences of such a meltdown are still far from fully understood. If only a fraction of the core's enormous inventory of radioactive material were released, the consequences to the surrounding population could be grave, indeed.[1]

Thus, while we are thankful that a catastrophe was averted, it would be dangerously wrong to conclude that a real risk was never present. Petitioners seek to rewrite history and, in so doing, to trivialize the nature of the threat and the stress suffered by those who were and remain at risk. The Court of Appeals was correct in recognizing the "holocaust potential of an errant nuclear reactor." (Pet. App. 15a)

---

[1] A number of analyses of the frequency and magnitude of potential consequences of reactor accidents have been done under NRC auspices. NRC uses for this purpose a computer code denoted as "CRAC" (Calculation of Reactor Accident Consequences). The most comprehensive analysis to date is contained in the *Reactor Safety Study: An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants*, WASH-1400 (October 1975). For a typical reactor, a release under adverse conditions involving 20-30% of the core inventory of iodine and particulates is calculated to result in 300 early deaths, 18,750 latent cancer deaths, and $10 billion in property damage. These figures are derived from *Overview of the Reactor Safety Consequences Model*, NUREG-0340 (June 1977) Table 10 at 38. The accident is denoted as "PWR-3" Note that the figures in that table for latent fatalities are reported on a per-year basis and must be multiplied to produce totals.

This accident is of very low probability but is by no means the worst case. Recent work done at Sandia National Laboratories under contract to NRC projects worst case consequences for an accident at TMI-1 of over 40,000 early deaths. Benjamin, *Nuclear Study Raises Estimates of Accident Tolls*, Washington Post, Nov. 1, 1982 at A1. Moreover, the WASH-1400 figures understate the consequences of such an accident at TMI, which is a more densely populated site than the hypothetical "typical" site used for the calculation. There are very large uncertainties involved in all such predictions.

Petitioner Metropolitan Edison has cited cases on pages 25-26 of its brief which suggest that the cognizability of effects on human psychological health under the National Environmental Policy Act may depend substantially upon whether the "fears" in question are grounded in reality. In *First National Bank of Chicago* v. *Richardson,* 484 F.2d 1369 (7th Cir. 1973), the Court concluded:

> As regards public "sensibilities" aroused by criminal defendants, we question whether such factors even if amenable to quantification, are properly cognizable *in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized.*

Id. at 1380 n. 13 (emphasis added); *see also Hanly* v. *Kleindeinst,* 471 F.2d 823, 834 (2d Cir. 1972). If the cognizability of the psychological trauma suffered by the respondents and their neighbors is dependent to a significant degree on whether the risk occasioning this trauma is a genuine one, the respondents in this case should prevail.

Both the Nuclear Regulatory Commission and Metropolitan Edison argue that, to the extent that the trauma is justified, it should be alleviated "by assuring that any factual basis therefor is publicly aired and fully explored. . . ." Brief for the United States and the United States Nuclear Regulatory Commission at 48. *See* also Brief of Metropolitan Edison Company *et al.* at 33: "Insofar as fears and perceptions coincide with reality, the public concern will be satisfied by consideration of the actual impacts. . . ." In the descriptions of the NRC review process[2] which accompany these pronouncements, the Petitioners omit some salient facts: While an Environmental Impact Statement was prepared before TMI-1 was licensed, that statement did not publicly disclose or discuss at all either the

[2] While laden with procedure, the actual safeguards provided by this process were characterized by NRC's Special Inquiry Group as "false assurance[s]" and "a ritualistic process, the result of which is effectively predetermined." Rogovin Report, Vol. II, Part I at 11. The Rogovin Report's recommendations for enhancing effective public participation were never followed by NRC.

probability or the potential consequences of a serious nuclear accident. Under NRC policy, such an accident was simply deemed incredible. Proposed Annex to 10 CFR Part 50, Appendix D, 36 Fed. Reg. 22,851 (1971).

In the wake of the TMI-2 accident, NRC no longer claims that such accidents are incredible and will disclose and consider their probability and consequences in future Environmental Impact Statements. Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969, 45 Fed. Reg. 40,101 (June 13, 1980). However, it proposes to allow operation of TMI-1 without publicly airing or considering these potential impacts—precisely the impacts which are of concern to the neighbors of TMI—because TMI-1 was licensed to operate before NRC was compelled by the intrusion of reality to change its policy. *Metropolitan Edison Company* (Three Mile Island Nuclear Station, Unit No. 1), ALAB-705 (December 13, 1982). Thus, the full exploration and public airing which is claimed by the government to be available to alleviate the concerns of the public is not completely full. On an issue which is justifiably of the utmost concern to the public, NRC keeps silence.

ARGUMENT

THE EVENTS OF MARCH 28-30 POSED A SERIOUS THREAT TO THE HEALTH AND SAFETY OF THE PEOPLE SURROUNDING THREE MILE ISLAND

In the immediate aftermath of the Three Mile Island accident, a number of investigations were undertaken to determine its causes, to identify with precision the course of the often-confusing events and the extent of the damage to the plant and to recommend changes in the way in which nuclear power plants are designed, constructed, licensed and operated so as to prevent such accidents, or worse, in the future. The two most comprehensive of these investigations are the *Report of the President's Commission on the Accident at Three Mile Island—The Need for Change: The Legacy of TMI* (Oct. 1979) ("Kemeny Commission") and *Three Mile Island, A Report to*

the Commissioners and to the Public, Nuclear Regulatory Special Inquiry Group (Jan. 1980) ("Rogovin Report"). The descriptions of the TMI-2 accident that follow are largely derived from those two sources. They demonstrate that the events of March 28-30, 1979, presented a serious risk to public health because a string of equipment failures, design errors and human blunders brought TMI-2 perilously close to irreversible damage and, while the plant approached the brink, neither the operators nor the NRC understood what was occurring or grasped the gravity of the situation. It is this remarkable and persistent lack of understanding that made TMI-2 such a close brush with disaster.

TMI-2 is a pressurized water reactor. In nuclear plants of this type, the reactor core is cooled by a closed loop of water kept under high pressure to prevent boiling, called the primary coolant system. The interface between this primary system and the "secondary" or "feedwater" loop consists of two so-called "steam generators." These are essentially boilers where water in the feedwater system is heated to steam by contact with tubes carrying the primary coolant. Heat is drawn off in this way from the primary system. Large pumps keep the water in both the primary and feedwater systems circulating. A more detailed description of a pressurized water reactor is contained in the Rogovin Report at 10-12.

The sequence of events on March 28, 1979, began with a clog in the equipment designed to remove impurities from the feedwater system—the "condensate polishers." The operators' inability to remove the clog led to a total loss of main feedwater. The backup system, emergency feedwater, did not deliver water because two valves which should have been open were closed. *Id.* at 7-8, 12-13, 17. Heat was not then being removed from the primary coolant system.[3]

[3] Although the reactor was automatically "tripped," stopping the chain reaction within the core, heat continued to be generated; the radioactive material in the fuel generates "decay heat" long after the chain reaction is stopped. This heat must be removed. Rogovin Report at 12.

The temperature and pressure in the primary system ascended quickly. Pressure reached the set point of a relief valve in the pressurizer,[4] causing that valve to open. Instead of closing automatically as pressure dropped, as it is designed to function, this valve, known as the "pilot operated relief valve" or PORV, stuck open. Primary cooling water rushed out this valve at the rate of 220 gallons per minute for over two hours. *Id.* at 13, 15.

The plant's operators were aware of the "inconstant histories" of such valves. *Id.* at 14. They had therefore installed an indicator light to tell them when the valve was open. The light turned on when electric power was supplied to the PORV and off when the power was shut off. *Id.* There is a fatal flaw in this design that was either overlooked or thought unimportant by those who designed it:

> Unfortunately, the light is proof only that power is reaching the valve-opening mechanism; it is only circumstantial evidence of the actual state of the valve itself, i.e., power has been cut off from the solenoid now, and the light shows it—but the valve remains open. It is ironic, in a day that will be marked by repeated refusal of the operators and supervisors to believe ominous readings from the reactor-monitoring instruments, that they elect to be misled by this bearer of what they perceived to be good tidings. *Id.*

Despite the fact that primary system pressure continued to drop precipitously, the operators failed to understand that they were experiencing a loss-of-coolant-accident. With primary cooling water continually pouring out the PORV and the remaining coolant boiling in the core, the core was gradually exposed and bubbles of steam and noncondensible gas were formed. *Id.* at 16, 23, 28, 47.

---

[4] The pressurizer is a tank in the primary system which is used to control primary system pressure. Rogovin Report at 11.

Meanwhile, the failures and errors proliferated. The emergency core cooling system was automatically initiated by a signal derived from low primary system pressure. Almost immediately, it was shut off by the operators who did not understand that they were losing cooling water. *Id.* at 16-17. Only a tiny trickle of cooling water was delivered to the overheating reactor core for the next three hours. *Id.* Shutting off emergency cooling was a key and continuing mistake. It was caused by a combination of complex factors involving the peculiar vulnerability of the Babcock and Wilcox design to vicissitudes in the feedwater system, lack of understanding on the part of the operators of the plant's reaction to this sort of loss-of-coolant-accident, grossly inadequate training and procedures, and the persistent failure of those in charge to believe the bad news being registered by their instruments and numerous other indications that the core was uncovered. *See* Rogovin Report at 16-20, 30, and Kemeny Commission at 93-100. The entire progression of the accident is described in the Rogovin Report at 7-87 and the Kemeny Commission at 90-137.

A great many more failures of human understanding, foresight and equipment followed those briefly described above. Despite the presence on-site within a few hours of numerous NRC personnel and the top technical people from the utility, and despite constant telephone communication with NRC headquarters and Babcock and Wilcox, the crucial fact that the core was uncovered for long periods of time was unknown to the plant operators on March 28. The Rogovin Report describes the pervasive and false sense of assurance as follows:

> In Lynchburg, the B&W task force calls it a day, secure in the thought that everything is all right. At GPUSC headquartered in New Jersey, Bob Arnold's engineers too feel satisfied that they have done a good day's work. They break up and leave for home around 9:00 p.m., already planning a Thursday they feel will be taken up chiefly with organizing an investigation and analysis of the accident.

This, however, is the true situation at TMI-2 on Wednesday night: The core is physically disarranged to such a degree that cooling water flow is impeded and steam pockets still surround some of the fuel. The reactor coolant system contains significant amounts of hydrogen, which also tends to block cooling water flow, as well as posing certain hazards of its own. *In short, the situation is markedly different, and substantially more ominous, than it would be with the core basically intact and the fuel rod cladding perforated only to a limited extent. Should the reactor coolant pumps be lost or system pressure drop again, continued core cooling would be endangered.* And, although it is not yet recognized, there already has been a potent demonstration of what can happen when vented hydrogen collects in the reactor building. [There has been a hydrogen explosion.]

With the failure to understand the continuing risks, there is also a neglect of measures that might be taken to reduce those risks. Procedures could be developed, for example, to drill the operators in the best means of coping with various malfunctions that might still occur. Precautionary action could be taken to avert a decrease in system pressure or a possible hydrogen explosion. Contingency plans need working on for early warning in the event of a possible need for evacuation.

None of this is done. Things are much more stable than they were, but the accident is far from ended. The plant is not fully under control. It is a stark fact that will not be fully appreciated by the management and staff, or by the regulators, until Friday.

In the interim, because critical things that might have gone wrong did not, this lack of appreciation does not affect the ultimate course of the accident, other than to delay recovery action. It does increase the ultimate risk, however, because appropriate contingency planning and mitigating actions are not underway.

> Most important, insensitivity to the continuing danger on the part of key people in the utility and the NRC will affect the public perception of the accident and public confidence in the people in charge of protecting the public's interests. Early reports now indicate all is well—things are under control. Later reports will show that they are not at all.

Rogovin Report at 47 (emphasis added).

Thus, Metropolitan Edison's claim to this court that "there was no actual danger to the public" is untrue. The danger was real; that it was ultimately averted cannot change this fact.

Both the Rogovin Report and the Kemeny Commission performed analyses to determine how close the plant was to irreversible meltdown. As noted above, the emergency core cooling system was shut off by the operators early in the accident. Had this system not been subsequently turned on at three hours and 20 minutes into the accident, the TMI-2 core could have reached melting temperature in less than an hour and, depending upon the assumptions made, in possibly only a few minutes. *Staff Reports to the President's Commission on the Accident at Three Mile Island, Report of the Technical Assessment Task Force,* Vol. II at 118. Another scenario involves the PORV, the valve through which the cooling water escaped. A shift foreman reporting for duty two hours into the accident closed a block valve upsteam of the PORV, terminating the loss of coolant. The Rogovin Report concludes:

> If that block valve had remained open, our projections show that within 30 to 60 minutes a substantial amount of the reactor fuel would have begun to melt down—requiring at least the precautionary evacuation of thousands of people living near the plant, and potentially serious public health and safety consequences for the immediate area.

Rogovin Report at 91.

After the onset of meltdown, the uncertainties in predicting how an accident could unfold increase dramatically. Calculations were performed indicating that the TMI-2 containment could survive. Kemeny Commission at 14. This was not, however, viewed by the analysts as cause for relief:

> Whether in this particular case we came close to a catastrophic accident or not, this accident was too serious. Accidents as serious as TMI should not be allowed to occur in the future.
>
> The accident got sufficiently out of hand so that those attempting to control it were operating somewhat in the dark. . . . *Once an accident reaches this stage, one that goes beyond well-understood principles, and puts those controlling the accident into an experimental mode (this happened during the first day), the uncertainty of whether an accident could result in major releases of radioactivity is too high.*

Id. at 15 (emphasis added).

It is ironic that the supposed hydrogen bubble inside the reactor coolant system which finally precipitated NRC's recommendation for a precautionary evacuation on Friday, March 30, was not a genuine safety hazard. Rogovin Report at 77-83.[5] Petitioners and *amici* focus on this contretemps, claiming that it shows that community "fears" were unfounded. Brief for Petitioners Metropolitan Edison Company *et al.* at 4, 35; Brief for *Amicus Curiae* Scientists and Engineers for Secure Energy, Inc. at 20. The irony is that when the public was genuinely threatened early in the accident, neither Metropolitan Edison nor the NRC was aware of it. As Commissioner Peter Bradford said: "If anybody had told us on Tuesday that the Three Mile

---

[5] Hydrogen was created by the reaction of the crumbling and overheated fuel cladding with water. While it was not explosive while contained in the primary system, because of a lack of oxygen to create a combustible mixture, substantial amounts of hydrogen did leak into the containment building where it exploded. Rogovin Report at 42-43.

Island core was going to be uncovered on Wednesday, I can't imagine that we would have failed to order an evacuation."[6] Those who now seek to downplay the risk to public safety during the accident should find no support in the frightening fact that their confusion was so complete that they were unable to distinguish real from unreal danger.

CONCLUSION

The theme running through the NRC's and Metropolitan Edison's presentations to this Court is that the Respondents' perception of the risk to which they were subject in March of 1979 is grossly at variance with reality. That finding is the logical underpinning of the core of the government's position: that it is the "existence" of the plant itself which causes their trauma, "a cause entirely distinct from the radiation or accident potential associated with plant operation," and a cause which is not related to environmental impact. Brief for the United States *et al.* at 29; *see also Id.* at 26, 43. As we have shown above, the conclusions of those who investigated the accident are utterly at odds with Petitioners' belated trivialization of the danger.

The risk of death and injury from the release of radioactive material is an environmental impact causally related to the operation of the Three Mile Island nuclear power plant, not its "existence," as the government would have it. NRC recognizes as much.[7] The probability and consequences of serious accidents are now considered in the Environmental Impact Statements for new nuclear plants, although these have never been considered for TMI-1. Statement of Interim Policy, Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969, 45 Fed. Reg. 40,101 (June 13, 1980). That risk was never so close to actualization as on

---

[6] D. Ford, *Three Mile Island, Thirty Minutes to Meltdown* 175 (Penguin Books 1982).

[7] "Of course, NEPA may require the consideration of events—such as a major nuclear accident—that are quite unlikely to occur but that would entail substantial environmental effects if they occurred." Brief for the United States *et al.* at 45-46.

March 28, 1979. The trauma which resulted and which is said by the Respondents to persist is grounded in reality. However unfortunate that reality, we do not profit from denying it. *Amicus curiae* Union of Concerned Scientists urges the Court to affirm the decision below.

Respectfully submitted,

ELLYN R. WEISS
Counsel of Record

General Counsel
UNION OF CONCERNED SCIENTISTS

HARMON AND WEISS
Suite 506
1725 I Street, N.W.
Washington, D.C. 20006
(202) 833-9070

Attorney for
Amicus Curiae

January 29, 1983

Supreme Court, U.S.
FILED
DEC 28 1982
ALEXANDER L. STEVAS
CLERK

Nos. 81-2399 and 82-358

In the Supreme Court of the United States

OCTOBER TERM, 1982

METROPOLITAN EDISON COMPANY, ET AL., PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA, PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF FOR THE UNITED STATES AND THE UNITED STATES NUCLEAR REGULATORY COMMISSION

REX. E. LEE
Solicitor General
CAROL E. DINKINS
Assistant Attorney General
LOUIS F. CLAIBORNE
Deputy Solicitor General
JOSHUA I. SCHWARTZ
Assistant to the Solicitor General
JAMES M. SPEARS
JACQUES B. GELIN
RICHARD J. LAZARUS
Attorneys
Department of Justice
Washington, D.C. 20530
(202) 633-2217

LEONARD BICKWIT, JR.
General Counsel
MARTIN G. MALSCH
Deputy General Counsel
PETER G. CRANE
Acting Assistant General Counsel
Nuclear Regulatory Commission
Washington, D.C. 20555

QUESTION PRESENTED

Whether the National Environmental Policy Act requires the Nuclear Regulatory Commission to consider stress (and accompanying physical symptoms), allegedly induced in persons residing in the vicinity of the Three Mile Island nuclear power facility by the pending proposal to authorize restart of Unit 1 of that facility (the unit not involved in the 1979 accident), in connection with its action upon that proposal, notwithstanding the absence of any causal nexus between the alleged stress and the effects of the proposed action upon the natural environment.

PARTIES TO THE PROCEEDING

In addition to the parties listed in the caption of these consolidated cases, parties to this case include Jersey Central Power & Light Co., and Pennsylvania Electric Co., additional petitioners in No. 81-2399 and (along with Metropolitan Edison Co.) nominal respondents in No. 82-358. The federal petitioners in No. 82-358 are nominal respondents in No. 81-2399.

TABLE OF CONTENTS

	Page
Opinions below	1
Jurisdiction	2
Statute involved	2
Statement	2
Summary of Argument	19
Argument:	
NEPA does not require analysis of emotional stress allegedly flowing from fear of the consequences of operation of a nuclear power plant	23
A. NEPA requires consideration only of the environmental effects of major environmentally-significant federal actions	23
B. Stress cause by fear of operation of TMI-1 is not environmentally caused	42
Conclusion	50

TABLE OF AUTHORITIES

Cases:

Aberdeen & R. R.R. v. *SCRAP*, 422 U.S. 289 ..22, 25, 26

Andrus v. *Sierra Club*, 442 U.S. 347 ..... 25, 34, 35

Breckinridge v. *Rumsfeld*, 537 F.2d 864, cert. denied, 429 U.S. 1061 38

British Airways Board v. *Port Authority*, 558 F.2d 75 24

Chelsea Neighborhood Associations v. *Postal Service*, 516 F.2d 378 39

Citizens Against Toxic Sprays, Inc. v. *Bergland*, 428 F. Supp. 908 27

Citizens Committee Against Interstate Route 675 v. *Lewis*, 542 F. Supp. 496 39

Como-Falcon Coalition v. *Department of Labor*, 465 F. Supp. 850, aff'd, 609 F.2d 342, cert. denied, 446 U.S. 936 ..... 5, 39

Environmental Defense Fund, Inc. v. *Department of Transportation*, 6 Envtl. L. Rep. (Envtl. L. Inst.) 20581 24

First National Bank of Chicago v. *Richardson*, 484 F.2d 1369 ..... 5, 39

Cases—Continued: Page

Flint Ridge Development Co. v. *Scenic Rivers Association*, 426 U.S. 776 25
Goodman Group, Inc. v. *Dishroom*, 679 F.2d 182 . 39
Hanly v. *Kleindienst*, 471 F.2d 823, cert. denied, 412 U.S. 908 ..... 5, 24, 39, 40
Hanly v. *Mitchell*, 460 F.2d 640, cert. denied, 409 U.S. 990 ..... 5, 39
Image of Greater San Antonio v. *Brown*, 570 F.2d 517 38
Kleppe v. *Sierra Club*, 427 U.S. 390 ....21, 22, 25, 26, 41
Maryland-National Capital Park & Planning Commission v. *United States Postal Service*, 487 F.2d 1029 ..... 5, 27, 31, 38
Metropolitan Edison Co., In re, 10 N.R.C. 141 3
Metropolitan Edison Co., In re, 11 N.R.C. 297 ... 4
Metropolitan Edison Co., In re, 15 N.R.C. 407 ... 11, 17
Named Individual Members of the San Antonio Conservation Society v. *Texas Highway Department*, 400 U.S. 698 25
National Organization for the Reform of Marijuana Laws v. *United States Department of State*, 452 F. Supp. 1226 27
New Hampshire v. *Atomic Energy Commission*, 406 F.2d 170, cert. denied, 395 U.S. 962 ..... 17, 31
Nucleus of Chicago Homeowners Association v. *Lynn*, 524 F.2d 225, cert. denied, 424 U.S. 967 . 5, 39
Piper Aircraft Co. v. *Reyno*, 454 U.S. 235 23
Society for Animal Rights, Inc. v. *Schlesinger*, 512 F.2d 915 24
Strycker's Bay Neighborhood Council, Inc. v. *Karlen*, 444 U.S. 223 .....21, 26, 41
Union of Concerned Scientists v. *Atomic Energy Commission*, 499 F.2d 1069 49
United States v. *Bacto-Unidisk*, 394 U.S. 784 31
United States v. *SCRAP*, 421 U.S. 669..... 25
Vermont Yankee Nuclear Power Corp. v. *NRDC*, 435 U.S. 519 .....26, 29, 40, 41, 50
Weinberger v. *Catholic Action/Peace Education Project*, 454 U.S. 139 ..... 22, 26, 40, 49

Statutes and regulations: Page

Atomic Energy Act of 1954, 42 U.S.C. (& Supp. IV) 2011 *et seq.*: ..... passim
42 U.S.C. 2012(d) 17
42 U.S.C. 2133(d) 11, 17
42 U.S.C. 2239(a) 49
42 U.S.C. 2239(b) 9
National Environmental Policy Act of 1969, 42 U.S.C. (& Supp. IV) 4321 *et seq.*:..... passim
Section 2, 42 U.S.C. 4321 ..... 2, 1a
Section 101, 42 U.S.C. 4331 ..... 2, 36, 37, 1a
Section 101(a), 42 U.S.C. 4331(a) 35, 1a
Section 102, 42 U.S.C. 4332 ..... 2, 23, 1a
Section 102(2), 42 U.S.C. 4332(2) 23, 2a
Section 102(2)(A), 42 U.S.C. 4332(2)(A) 29, 2a
Section 102(2)(C), 42 U.S.C. 4332(2)(C) 19, 22, 23, 24, 29, 30, 31, 49, 3a
Section 102(2)(C)(i), 42 U.S.C. 4332(2)(C)(i) 23, 29, 30, 35, 38, 47, 3a
28 U.S.C. (Supp. IV) 2342(c) 9
21 C.F.R 25.1(f) 28
40 C.F.R. 1500 *et seq.* 35
40 C.F.R. Part 1501:
Section 1501.3..... 24
Section 1501.4(b) 24
Section 1501.4(c) 24
40 C.F.R. Part 1502:
Section 1502.9(c) 14, 24
Section 1502.10(g) 35
Section 1502.14(f) 47
Section 1502.16 35
Section 1502.16(h) 47
40 C.F.R. 1503.3(d) 47
40 C.F.R. Part 1505:
Section 1505.2(c) 47
Section 1505.3..... 47
40 C.F.R. 1506.6..... 49
40 C.F.R. Part 1508:
Section 1508.8..... 36

Statutes and regulations—Continued: Page
Section 1508.14 ..... 21, 36, 37
Section 1508.20 47

Miscellaneous: Page
115 Cong. Rec. (1969):
p. 19009 33
p. 26576 33
p. 26577 33
p. 26579 33
p. 26581 33
p. 26583 33
p. 26584 33
p. 29066 33
p. 40416 32
p. 40417 ..... 33, 46
p. 40924 32
43 Fed. Reg. 55988 (1978) 36
44 Fed. Reg. 40461 (1979) 3
H.R. Rep. No. 91-378, 91st Cong., 1st Sess. (1969) 33
S. Rep. No. 1211, 79th Cong., 2d Sess. (1946)..... 17
S. Rep. No. 1677, 87th Cong., 2d Sess. (1962)..... 49
S. Rep. No. 91-296, 91st Cong., 1st Sess. (1969) .. 33, 49

In the Supreme Court of the United States

OCTOBER TERM, 1982

No. 81-2399

METROPOLITAN EDISON COMPANY, ET AL., PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

82-358

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA, PETITIONERS

v.

PEOPLE AGAINST NUCLEAR ENERGY, ET AL.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF FOR THE UNITED STATES AND THE UNITED STATES NUCLEAR REGULATORY COMMISSION

OPINIONS BELOW

The opinion of the court of appeals (81-2399 Pet. App. 1a-76a) is reported at 678 F.2d 222.[1] The orders of the Nuclear Regulatory Commission reviewed by the court of appeals (Pet. App. 77a-78a, 101a-102a) and ancillary opinions (Pet. App. 79a-100a) are reported at 12 N.R.C. 607 and 14 N.R.C. 593. The opinion of the Atomic Safety and Licensing Board (J.A. 29-47) is reported at 11 N.R.C. 297.

---

[1] Because the petition appendix in No. 81-2399, reproduces all of the materials required by Rule 21(k), these materials were not duplicated in the petition in No. 82-358. Accordingly, we refer here to the petition appendix in No. 81-2399 (hereafter "Pet. App.").

JURISDICTION

The amended judgment of the court of appeals (Pet. App. 103a-104a) was entered (without supporting opinions) on April 1, 1982.[2] A modified version of the amended judgment (Pet. App. 29a-30a) was entered on May 14, 1982, at the time opinions were issued. On June 23, 1982, the Chief Justice extended the time for filing a petition for a writ of certiorari to and including August 20, 1982. On August 12, 1982, the Chief Justice further extended the time for filing such a petition to and including August 30, 1982. The petition in No. 81-2399 was filed on July 1, 1982, and the petition in No. 82-358 was filed on August 30, 1982. The petitions were granted and the cases consolidated on November 1, 1982. The jurisdiction of this Court rests on 28 U.S.C. 1254(1).

STATUTES INVOLVED

Sections 2, 101 and 102 of the National Environmental Policy Act of 1969, 42 U.S.C. 4321, 4331 and 4332, are reproduced in the appendix to this brief.

STATEMENT

1. This case involves the Three Mile Island Unit 1 nuclear power reactor ("TMI-1"), located near Harrisburg, Pennsylvania. After preparing draft and final environmental statements and conducting an extensive safety review, the Atomic Energy Commission, in 1974, granted the private petitioners, Metropolitan Edison Company et al. ("the utilities"), a license to operate TMI-1, and the unit entered service. Four years later, the utilities received a license from the successor agency, the Nuclear Regulatory Commission, to operate a second facility at the site ("TMI-2"). On March 28, 1979, a significant accident affecting the TMI-2 reactor took place. At the time of the TMI-2 accident, TMI-1 was not in operation, having been shut down by the licensee for routine maintenance and refueling. In

[2] The April 2 judgment, replaced an interim judgment (Pet. App. 105a-107a) issued by the court of appeals, also without opinions, on January 7, 1982.

the aftermath of the accident, the Commission directed the licensee to keep TMI-1 shut down pending further order of the Commission and announced that it would conduct a hearing to determine whether, and under what circumstances, the licensee should be allowed to resume operation of the plant. 44 Fed. Reg. 40461 (1979) (J.A. 8).

By further order, the Commission specified the issues to be addressed by the Atomic Safety and Licensing Board designated to conduct the "restart" proceeding. All related to concerns which the accident at TMI-2 had raised about the safety of TMI-1. *In re Metropolitan Edison Co.*, 10 N.R.C. 141 (1979) (J.A. 9-25). These included: deficiencies in the design common to the two reactors, the potential for interaction between the plants, the possible effect on TMI-1 of the decontamination of TMI-2, the management capability of the licensee, and deficiencies in the licensee's operating procedures and emergency plans. The Commission added that although accident-related psychological distress on the part of members of the public living near TMI that was *"unrelated directly to exposure to radiation"* was the subject of "real and substantial concern," it had not yet determined whether such issues "c[ould] be legally relevant to the[e] proceeding" (J.A. 20; emphasis added). The Commission accordingly invited parties wishing to raise such contentions to address the pertinent legal issues in briefs filed with the Atomic Safety and Licensing Board conducting the restart proceeding. That Board was, in turn, directed to certify the issue to the Commission for decision, with or without its own recommendation.

Respondent, People Against Nuclear Energy ("PANE"), an organization composed of residents of the Harrisburg area that had intervened in the restart proceeding, responded to the Commission's invitation, submitting two draft contentions (Pet. App. 115a-116a) for consideration, along with arguments that their consideration was legally mandated by both the Atomic Energy Act of 1954 , 42 U.S.C. (& Supp. IV) 2011 *et seq.*, and the National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. (& Supp. IV) 4321 *et seq.*

PANE claimed, first, that the resumed operation of TMI-1 would exacerbate the "severe psychological stress" which its members and other residents of the TMI area had allegedly suffered as a result of the accident at TMI-2. PANE asserted that the prevailing stress took the form of "increased anxiety, tension and fear, [and] a sense of helplessness," accompanied by physical symptoms such as skin rashes, aggravated ulcers, and skeletal and muscular problems. Respondent alleged that continuing injury to the health of the residents of the area would result "[a]s long as th[e] possibility [that TMI Unit 1 will reopen] exists" and that it was accordingly "impossible * * * to operate TMI 1 without endangering the public health and safety" (Pet. App. 115a).

For its second contention, PANE asserted that resumption of operations at TMI-1 would cause communities in the vicinity of TMI to be perceived as undesirable, thereby exacerbating damage to their economic and social "stability, cohesiveness and well being" caused by "a loss of citizen confidence in the ability of [community] institutions to function properly and in a helpful manner during a crisis" resulting from the aftermath of the 1979 TMI-2 accident. PANE urged that for this additional reason, TMI-1 should never again be allowed to operate (Pet. App. 116a).

2. On February 22, 1980, the Licensing Board issued its "Certification to the Commission on Psychological Distress Issues." *In re Metropolitan Edison Co.*, 11 N.R.C. 297 (1980) (J.A. 29-47). The Board concluded that the alleged "psychological stress is probably not cognizable under the Atomic Energy Act" because such effects are not radiation hazards (J.A. 31, 32).[3] On the other hand, the Board concluded that "the Commission, within its discretion, may and

---

[3] The Board added that "the Commission might conclude to the contrary for reasons not discussed by the parties" (J.A. 31). The Board apparently meant to suggest that the Commission itself had sufficient discretion to conclude that PANE's allegations of a mental health effect rested in part upon "radiological hazards associated with accident conditions" and were accordingly cognizable under the Atomic Energy Act. The Board thought that either position adopted by the Commission on this question of interpretation of its governing statute would be entitled to substantial deference and would withstand judicial review (J.A. 32-33).

should consider psychological stress and community fears under NEPA for the purpose of mitigating the effects of its TMI-1 licensing activity" (J.A. 29, 47).[4] Rejecting the Commission staff's contention that stress and community fears are not cognizable under NEPA because unquantifiable, the Board found "a sufficient prehearing basis for the premise that the effects are measurable," stressing that "[p]recise numerical quantification is not necessary" (*id.* at 36 & n. 8).[5] Acknowledging that there was no evidence before it

---

[4] The Licensing Board rejected the Commission staff's contention that psychological effects of restart authorization are not cognizable under NEPA because not traceable to a "direct impact upon the physical environment" (J.A. 34). Accepting the staff's premise that such a nexus was required, the Board reasoned, however, that (J.A. 35):

> [t]he psychological stress alleged by intervenors here is related to a significant physical environmental impact: the operation of TMI 1 coupled with residual effects of the accident at TMI 2. * * * The very fact that an EIS and cost/benefit balancing [were undertaken at the time TMI was initially licensed] is a recognition of the fact that the operation of TMI 1 involves a significant physical impact upon the environment.

[5] The Board distinguished cases in which the courts of appeals have held psychological and socioeconomic effects of agency action to lie outside the scope of NEPA analysis. See, e.g., *Hanly* v. *Mitchell*, 460 F.2d 640 (2d Cir.), cert. denied, 409 U.S. 990 (1972); *Hanly* v. *Kleindienst*, 471 F.2d 823 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973); *Maryland-National Capital Park & Planning Commission* v. *United States Postal Service*, 487 F.2d 1029, 1037-1038 (D.C. Cir. 1973); *First National Bank of Chicago* v. *Richardson*, 484 F.2d 1369, 1375 (7th Cir. 1973); *Nucleus of Chicago Homeowners Association* v. *Lynn*, 524 F.2d 225 (7th Cir. 1975), cert. denied, 424 U.S. 967 (1976); see also *Como-Falcon Coalition* v. *Department of Labor*, 465 F. Supp. 850, 857 n.2 (D. Minn. 1978), aff'd, 609 F.2d 342 (8th Cir. 1979), cert. denied, 446 U.S. 936 (1980). The Board stressed that none of these decisions *precludes* agency consideration of mental health or socioeconomic effects associated with federal action. The Board noted, as well, that many of the foregoing cases involved "the argument that the mere presence of a disadvantaged group of people could constitute a pollution to the enviro[n]ment of a higher socioeconomic group," an argument with unacceptable overtones of racial and class discrimination, which, as a matter of policy, were to be excluded from environmental analysis. By contrast, here the Board thought "there [we]re no overriding national policies preventing the frank acknowledgement that the presence of the impacting force (operation of TMI 1) * * * may be considered" (J.A. 38).

that methods existed that "would permit the measurement of the psychological stress phenomenon well enough for use in a full-scale cost/benefit balancing in an * * * EIS," and suggesting that it was within the Commission's discretion to determine whether or not its staff should be directed to develop the necessary methodology, the Board nonetheless concluded that NEPA permitted consideration of the alleged stress in some fashion, even though preparation of a formal environmental impact statement (EIS) or even a threshold environmental impact appraisal (EIA) addressing this subject might not be required or even possible (J.A. 32, 40-43).

The Licensing Board rejected the contention, advanced by the licensee and the Commission staff, that stress is not cognizable under NEPA in the setting of this case because the fears that are alleged to occasion it are not rationally grounded (J.A. 38-39). The Board noted that the TMI-2 accident merely underscores the fundamental premise of the Atomic Energy Act that nuclear power improperly controlled is a source of danger, and "urge[d] the Commission to reject out-of-hand" this contention, suggesting that "fears of TMI 1 operation" are cognizable under NEPA because "they are * * * amenable to mitigation" (J.A. 39). The Board acknowledged that "the best way to minimize any psychological stress in the communities around TMI 1 is to make the plant safe or not allow it to operate" (J.A. 44). The Board nonetheless suggested that even if the licensee had met the requirements of the Atomic Energy Act, for instance those requiring monitoring of radiation releases from the plant, consideration under NEPA of stress effects might prompt the Commission to require the licensee to install additional monitoring devices to reduce public apprehension (J.A. 44-45). The Board further reasoned that giving plant neighbors the opportunity to voice their fears in the restart proceeding would in and of itself constitute a significant stress mitigation strategy (J.A. 45).

3. On December 5, 1980, the Commission issued an order (Pet. App. 77a-78a) directing that respondent's contentions based on "psychological stress" be excluded from the restart proceedings. The order reflected that the four Commissioners then holding office were evenly divided as to whether the stress issue should be considered by the licensing board, and that the procedural effect of the tie vote was to exclude the stress issue from the proceeding. The order indicated further that the issue would be reconsidered when the vacant fifth seat on the Commission had been filled.

No opinion for the Commission was issued. Instead, each Commissioner wrote separately setting forth his reasoning. Chairman Ahearne concluded that "an NRC licensing action is not an appropriate forum for psychological stress issues" (Pet. App. 79a). He maintained that stress is not cognizable under the Atomic Energy Act, and described "the issue of whether NEPA provides sufficient authority to impose mitigation measures on the licensee in the context of the restart proceeding" as "problematical" (*id.* at 80a). He concluded that the Commission's only obligation respecting stress is to mitigate any such effects by ensuring that TMI-1 is safe before restart is authorized.

Emphasizing that "the psychological stress at issue is not that associated with actual exposure to radiation—but the stress caused by the possibility that [petitioner] and others might be so exposed by future operation," and that "[t]here is no way to allay that fear except not to build or operate the reactor" (Pet. App. 82a), Commissioner Hendrie agreed that neither the Atomic Energy Act nor NEPA required consideration of respondents' contentions respecting stress, as such, and that the Commission's obligation was, instead, to ensure that TMI-1 is operated safely, and that the public is adequately informed of the relevant facts (*id.* at 82-91a). Commissioner Hendrie concluded that Congress did not intend that the Commission consider stress in licensing decisions under the Atomic Energy Act (*id.* at 83a-87a).

Respecting NEPA, Commission Hendrie relied upon the weight of federal judicial authority (see page 5 note 5, *supra*) placing psychological effects outside the scope of the

required environmental analysis. He rejected respondent's suggestion that the alleged presence of physical manifestations of stress served to distinguish this case, explaining (Pet. App. 89a):

> Presumably, psychological distress will always be accompanied by physical symptoms in a certain proportion of the persons affected. As a legal matter, I see no basis for differentiating between psychological stress that has physical symptoms and that which is without physical symptoms * * *. In either case, the problems of quantification and proof would be such as to make rational factfinding extremely difficult * * *.

Commissioner Hendrie argued that the nature of the alleged effects of the restart decision upon mental health rendered consideration of mitigation possibilities, mandated by NEPA, inapposite (*ibid.*):

> If anxieties are rationally based, the corrective measures which would alleviate the stress would presumably be justifiable in terms of protecting physical health and safety [under the Atomic Energy Act]—irrespective of their effect on psychological stress. If the anxieties are irrationally based, on the other hand, then they are by definition not likely to be alleviated by a demonstration that some additional safety feature has been added.

Finally, Commissioner Hendrie underscored that stress occasioned by fear of operation of TMI-1 was unrelated to any environmental impact of operation and was accordingly entirely outside the intended scope of NEPA (Pet. App. 90a-91a; emphasis in original):

> NEPA is a very broad statute and has had, as it was intended to have, a profound effect upon agency decision making. But unless it is to displace the political process it must have some limits. It cannot be read to require that all conceivably relevant factors be heard by an agency including those already considered by Congress. It was intended and must be so construed to deal with *environmental* degradation. To be sure if one of a project's effects on the environment causes health problems, the associated mental impacts are in an appropriate consideration; but here we are being

asked to consider effects apart from any effect upon the environment.

Intervenor's argument is essentially that even if we are satisfied that the environmental impact is minimal, we must nevertheless hear evidence on, and consider in our decision, their fears that we are wrong and the mental stress thus engendered. The short answer is that Congress has already decided that the country is to have a nuclear power program even if it makes some people uneasy.

Commissioners Gilinsky and Bradford would have directed the Licensing Board to hear evidence respecting stress effects. Commissioner Gilinsky relied primarily upon the Licensing Board's analysis (Pet. App. 91a-92a), and did not address the question whether NEPA (or the Atomic Energy Act) *required* consideration of such evidence. Commissioner Bradford argued (*id.* at 93a-100a) that the TMI-2 accident made the TMI-1 restart hearing a unique one and that, under the circumstances, an important means of alleviating stress that might be occasioned by the Commission's decision would be to allow full airing of the stress issue before the Licensing Board. Because he concluded that the Commission should, in the exercise of its discretion, consider respondent's contentions respecting stress, Commissioner Bradford declined to decide whether NEPA requires such consideration (*id.* at 94a n.3).

4. a. On February 3, 1981, pursuant to 28 U.S.C. (Supp. IV) 2342(c) and 42 U.S.C. 2239(b), respondent filed a petition for review of the Commission's order excluding the issues it sought to raise from the restart hearing.[6] In the

---

[6] On September 17, 1981, after the vacancy on the Commission had been filled and while the petition for review was pending, the Commission by a majority vote reaffirmed its directive that the stress issue be excluded from the restart proceeding (Pet. App. 101a-102a). No opinion for the Commission was issued.

During the restart proceedings several parties argued that preparation of an EIS was required before any decision respecting restart could be made. The Commission staff disagreed, but, pursuant to Commission regulations, prepared an environmental impact assessment (EIA) to support that determination. The EIA (J.A. 48-65) was issued on March 27, 1981, and supplemented (J.A. 66-87) on May 11, 1981, but

court of appeals, respondent argued that both NEPA and the Atomic Energy Act required the Commission to consider the psychological stress contentions in the restart proceeding. Specifically, respondent asserted that whether the "major federal action" in question was considered to be the restart of TMI-1 considered in isolation or the original licensing of TMI-1, coupled with continued NRC regulation of the plant, psychological stress and community deterioration were impacts of federal action that were required to be evaluated in an environmental impact statement (Pet. App. 10a). Respondent argued as well that the Commission's responsibility under the Atomic Energy Act to protect "public health and safety" encompassed psychological health.

The Commission responded that the projected restart of TMI-1 did not require further environmental analysis under NEPA because an EIS had been prepared when operation of the TMI-1 plant first was authorized, and that the restart decision itself did not represent a proposal for federal action within the meaning of NEPA, because it would restore the status quo as it existed before the Commission took enforcement action requiring that the plant remain shut down pending investigation of the accident at TMI-1 and its implications. Even if there were a proposal for federal action, the Commission argued, stress occasioned by

---

neither document addressed the alleged stress effects of the restart proposal. Among the topics addressed in the EIA are the physical impact of any additional construction upon the site, thermal and chemical effects of liquid effluents upon the receiving waters, effects of cooling water intake and discharge upon aquatic organisms in the adjacent Susquehanna River, the effect of evaporation of cooling water upon stream flow in the Susquehanna and upon local fogging conditions, normal and possible accidental releases of radiation, including the health effects, if any, of radiation releases incident to simultaneous operation of TMI-1 and decontamination of TMI-2, the noise associated with maintenance of a network of emergency warning sirens in the area surrounding the plant, and the visual impact of the plant and appurtenant facilities.

On December 15, 1981, while this case was under submission to the court of appeals, the Licensing Board rendered a decision that the EIA was adequate and that no EIS was required. The Commission itself has yet to take final action respecting NEPA compliance. See page 13 & note 13, *infra*.

operation of a nuclear power plant was not an effect required to be evaluated in an environmental impact statement. Similarly, the Commission contended that its duty under Section 103(d) of the Atomic Energy Act, 42 U.S.C. 2133(d), to deny any license the issuance of which "would be inimical to * * * the health and safety of the public" comprehended the physical hazards associated with nuclear materials but not psychological effects arising from fears of nuclear technology. The utilities, which had intervened in the court of appeals, took essentially the same position.

b. A panel of the court of appeals, Circuit Judges Wright and Wilkey and Senior Circuit Judge McGowan, heard oral argument on respondent's petition for review on November 17, 1981. On January 7, 1982, the court issued an interim judgment (Pet. App. 105a-107a), unaccompanied by an opinion for the court. That judgment, from which Judge Wilkey dissented, vacated the Commission's order and directed the Commission to prepare an environmental assessment regarding the effect of the proposed restart of TMI-1 on the "psychological health of neighboring residents and on the well-being of the surrounding communities" (*id.* at 106a). The Commission was further ordered to determine, on the basis of this environmental assessment, whether to prepare a full environmental impact statement. The Commission was enjoined from making any decision to restart TMI-1 until it had complied with these requirements. In addition, the Commission was directed (*ibid.*) to submit a statement of its reasons for "its determination that psychological health is not cognizable under the Atomic Energy Act."[7]

---

[7] On March 30, 1982, the Commission issued a "Memorandum and Order" responding to the court's directive. *In re Metropolitan Edison Co.*, 15 N.R.C. 407. Relying on the text and legislative history of the Atomic Energy Act, as well as pertinent judicial decisions, the Commission set forth its view that in administering the Atomic Energy Act, Congress intended that the Commission address itself only to the physical hazards associated with nuclear materials and activities. The Commission added that even if its statutory authority under the Act were broad enough to permit the discretionary consideration of mental health effects, strong policy considerations counseled against doing so. The Memorandum and Order was adopted by a 3-1 vote, with Commis-

On April 2, 1982, the court of appeals issued an amended judgment (Pet. App. 103a-104a), promising opinions to follow, again over Judge Wilkey's dissent. The amended judgment differed from the prior judgment in several respects. First, the Commission was no longer directed to prepare an environmental assessment, but was instead ordered to determine, by whatever procedures it deemed appropriate, whether since the preparation of the original environmental impact statement on TMI-1, "significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility" (*id.* at 104a). If the Commission answered that question in the affirmative, it was to prepare a supplemental environmental impact statement addressing both psychological health effects on individuals and effects on the well-being of the surrounding communities of operating TMI-1. Second, the court of appeals vacated the previously issued injunction against restart, explaining that because of "operating difficulties" at TMI-1 of which it took notice (discovery of a corrosion problem in the plant's steam generators that necessitates major repairs before restart), the injunction against restart was unnecessary. The court directed the Commission, however, to give it 30 days' notice if it intended to permit renewed operation "prior to complying with its obligations under NEPA" (*ibid.*) as declared by the court. See page 18, *infra*. The amended judgment made no reference to the Atomic Energy Act.

c. On May 14, 1982, the court of appeals issued its opinions (Pet. App. 1a-76a).[8] Judge Wright, joined by Judge McGowan, with Judge Wilkey dissenting, held that NEPA requires consideration in the restart proceeding of petitioner's contentions respecting psychological stress. At the same time, a different majority, Judge Wilkey, joined by

---

sioner Gilinsky dissenting and one seat on the Commission again vacant.

[8] A modified version of the amended judgment (Pet. App. 29a-30a) resting upon the opinions for the court was also issued.

Judge McGowan, with Judge Wright dissenting, upheld as reasonable the Commission's interpretation of its duties under the Atomic Energy Act, which excluded from consideration in licensing actions "stress allegedly resulting from fear of a nuclear accident" (*id.* at 67a).

On the NEPA issue Judge Wright declared that "[b]oth [of PANE's] contentions allege environmental effects within the meaning of NEPA" (Pet. App. 10a). He deemed it inconceivable that all mental health effects, no matter how severe, of proposed federal action, whatever its nature, are outside the scope of NEPA (*id.* at 11a, 17a). He reasoned that mental health effects of proposed federal actions are cognizable under NEPA because effects on health have generally been regarded as within the scope of NEPA, and because of "the simple fact that effects on psychological health are effects on the health of human beings" (*id.* at 11a-12a). The court of appeals distinguished cases holding that the social fears and anxieties of persons residing near proposed federal projects are not environmental effects cognizable under NEPA (see page 5, note 5, *supra*), observing that "[n]one of these cases * * * presents the holocaust potential of an errant nuclear reactor" (*id.* at 15a).[9] Eschewing any general rule, the court acknowledged that "NEPA does not encompass mere dissatisfactions arising from social opinions, economic concerns, or political disagreements with agency policies" (*id.* at 16a), but held that NEPA does apply to the "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe" alleged by respondent (*id.* at 16a–17a). Without attempting to locate the line between the two classes of effects recognized, the court simply concluded (*ibid.*):

---

[9] Distinguishing earlier court of appeals decisions excluding from NEPA analysis claims that federal projects would induce influxes of undesirable persons into impacted neighborhoods the court proclaimed (Pet. App. 16a):

> In this case, in contrast, PANE is not asking the agency to evaluate the effect of "people pollution" on the environment, but rather the effect of a governmental decision on human health.

> We cannot believe that the psychological aftermath of the March 29 accident falls outside the broad scope of the National Environmental Policy Act[10]

The court of appeals also rejected the Commission's alternative argument that the restart proceeding involved no proposal for federal action subject to NEPA (Pet. App. 18a-23a). Disavowing any reliance upon "the happenstance that TMI-1 was shut down for refueling at the time of the accident," the court instead stated that "the extent of the Commission's statutory responsibilities over licensed nuclear power facilities creates a continuing obligation to comply with NEPA" and that "[t]he 'major federal action' in the case of TMI-1 is not solely the initial licensing decision, but the Commission's continued exercise of supervisory responsibility over its operation and maintenance" (*id.* at 18a-19a). Treating NRC's regulation of its licensee as a continuing proposal for major federal action significantly affecting the environment, the court invoked the criteria for supplementation of an EIS outlined in the Council on Environment Quality's NEPA regulations (40 C.F.R. 1502.9(c)), directing the Commission to prepare a supplemental EIS addressing respondent's stress contentions (as well as the socioeconomic issues raised by respondent (see note 10, *supra*)), if the Commission determined that "significant new circumstances or information" regarding the mental health effects of operating TMI-1 had arisen since completion of the EIS prepared at the time of initial licensing (Pet. App. 23a-26a).

Judge Wilkey dissented from the court's judgment on the NEPA issue (Pet. App. 31a-59a, 67a-69a). He stated that the court had effected an unprecedented expansion of the scope of NEPA obligations by requiring consideration of

---

[10] Respecting PANE's allegation of socioeconomic effects, the court of appeals endorsed the Commission's suggestion that this represents a "classical 'socioeconomic' issue" constituting a secondary indirect effect that does not in and of itself require preparation or supplementation of an EIS, but which must be addressed if other matters require such formal NEPA analysis (Pet. App. 17a-18a). The court accordingly tied the community deterioration issue to the stress issue for purposes of prescribing the Commission's NEPA obligations.

stress resulting from fears triggered by federal action, an effect that is not traceable to the actual environmental impact of the private activity authorized by the pertinent federal licensing decision (*id.* at 36a-38a; footnotes omitted; emphasis in original):

> Judge Wright's opinion cites several cases holding that agencies must prepare an EIS when there is a potential effect on human health. What the opinion does not acknowledge is that in each of these cases the effect on health was caused by the federal action itself, *not* by individual's *fears* of the federal action. * * *
>
> [O]peration of a nuclear power plant may cause harm to human health—for example, due to the potential for exposure to radiation—and the NRC must therefore prepare an EIS and consider these potential harms before licensing the plant. * * *
>
> PANE's contention, however, is not that operation of TMI-1 will affect human health because of the dangers inherent in operation of a nuclear facility, but that individuals' *fears* of an accident at the plant, combined with their lack of confidence in the NRC, will lead to an extension of the psychological stress allegedly caused by the TMI-2 accident. It is patently obvious that this alleged effect is *entirely different* from those health effects at issue in any NEPA case relied upon by the majority. Instead of being required to assess *the risk* of a proposed activity * * * the agency is now required to assess *how people perceive and react to the risk*. PANE's primary purpose is to force the agency to determine whether people so fear renewed operation of TMI-1 that it should not go forward, even if the agency's assessment of the actual risk indicates that the impact on health will not be significant.
>
> This takes NEPA far beyond its intended purpose. *The environmental effects of a federal activity are now to include the views of the population itself on the very desirability of the activity* * * *.

Judge Wilkey noted that the majority's decision was contrary to decisions of three other courts of appeals, as well as a prior decision of the D.C. Circuit (Pet. App. 39a-40a & nn.19-21). He argued as well that the mental health effects alleged by PANE are too ephemeral, speculative and

subjective to be measured for purposes of NEPA analysis (*id.* at 40a-42a). Finally, Judge Wilkey found insupportable the majority's efforts (see pages 13–14 & note 9, *supra*) to confine its ruling to the facts of this case, explaining that the alleged severity in a particular case of an effect of a particular type relates only to the nature and extent of the analysis required by NEPA, if any, but has no bearing on the threshold question whether the class of effects involved constitutes environmental impacts within the scope of NEPA (*id.* at 42a-48a).

Judge Wilkey also rejected the majority's view that the initial licensing and ensuing oversight regulation of the TMI-1 facility constituted for NEPA purposes a single continuing major federal action (Pet. App. 48a-50a). He noted that under the majority's analysis "the fact that * * * the NRC is proposing to restart the plant is irrelevant." That analysis, Judge Wilkey explained, is inconsistent with the requirements of NEPA, which governs only proposed actions. Judge Wilkey appears to have concluded, however, that because TMI-1 was shut down, the Commission's restart decision itself constituted federal action for NEPA purposes (*id.* at 50a). On the other hand, he stressed that the majority's analysis was overly broad and would effect a substantial and unwarranted increase in the NEPA obligations of NRC and all other federal agencies. For instance, he explained (*id.* at 49a):

> [U]nder the majority's interpretation, the NRC is engaged in * * * "action" [subject to NEPA] every second of every day. It thus will be possible for NEPA to apply even when a nuclear plant is operating pursuant to an NRC license and the NRC proposes to take no action to upset this status quo.

d. On the Atomic Energy Act issue, the court of appeals (Judge Wilkey joined by Judge McGowan) upheld the Commission's conclusion that consideration of respondent's contentions was not mandated by statute (Pet. App. 59a-67a).[11] The court of appeals observed that substantial

---

[11] Judge McGowan did not write separately to explain his opposed views on the two issues presented to the court of appeals.

deference is due to the Commission's interpretation of the Atomic Energy Act, its governing statute (*id.* at 60a-61a). The court approved the conclusion of the First Circuit in *New Hampshire* v. *Atomic Energy Commission*, 406 F.2d 170, cert. denied, 395 U.S. 962 (1969), based upon pertinent legislative history, administrative interpretation, and congressional oversight, that in enjoining the Commission to "protect the health and safety of the public" (42 U.S.C. 2012(d); see also 42 U.S.C. 2133 (d)) "Congress 'had in mind only the special hazards of radioactivity' and that the Commission's responsibility is 'confined to scrutiny of and protection against hazards from radiation'" (Pet. App. 62a, quoting *New Hampshire* v. *Atomic Energy Commission*, *supra*, 406 F.2d at 174, 175). The court of appeals concluded that Congress' concern was "'the danger from explosion, radioactivity, and other harmful or toxic effects incident to the presence of such materials" (Pet. App. 63a, quoting S. Rep. No. 1211, 79th Cong., 2d Sess. 1335 (1946)).

The court of appeals also rejected respondent's alternative contention that stress induced in neighbors by operation of a nuclear power plant, is, in any event, a "special hazard of radioactivity" within this definition (Pet. App. 64a-66a). The court explained (*id.* at 64a, quoting *In re Metropolitan Edison Co.*, 15 N.R.C. 407, 412 (1982)):

> "Presumably, every hazardous technology gives rise to fears associated with it: fear of being inundated by failure of a newly constructed dam, for example, or of being hit by debris from a crashing airplane." Individuals may experience psychological trauma from the occurrence of accidents or disasters such as these * * *. It is obvious, therefore, that "post-traumatic psychological stress" can result from any traumatic event and is not so peculiar to nuclear energy that Congress can be deemed to have considered it a *special* hazard of radioactivity.

Judge Wright dissented from the judgment of the court of appeals on the Atomic Energy Act issue (Pet. App. 70a-76a). He complained that the court had given undue deference to the Commission's interpretation of the Act and

asserted that the plain meaning of the statutory directive to protect the health and safety of the public dictates that (*id.* at 70a) "[i]f operation of a nuclear facility would be inimical to the psychological health of the public, the Commission must not approve the operation."[12]

5. Subsequent to entry of the court of appeals' decision, on October 6, 1982, the Commission issued an order announcing its intention to decide, after conducting public hearings, whether to lift the immediate effectiveness of the two 1979 orders that required that TMI-1 facility remain shut down pending further order of the Commission (see pages 3–4, *supra*). A decision is presently anticipated in January 1983. However, as the October 6 order makes clear, other barriers to operation of TMI-1 remain, including the resolution of the steam generator corrosion problem noted by the court of appeals (Pet. App. 104a), and any necessary agency review of the licensee's repairs to the steam generators. For this reason, it is the Commission's view that a decision to lift the immediate effectiveness of the shutdown orders would not constitute "a final decision regarding the restart of TMI-1" within the terms of the judgment of the court of appeals requiring advance notice to the court of such a decision (Pet. App. 30a; see page 12, *supra*). The Commission has nonetheless provided notice to the court of appeals of its intention to reach a decision respecting the 1979 shutdown orders.[13]

---

[12] Outlining the application of this standard Judge Wright added (Pet. App. 70a):

> Not all fears and worries, of course, are psychological health effects within the definitions of medical science. The adverse psychological impact of restarting TMI-1 may or may not rise to the level of a health problem; even if it does, the same might not be true of the fears and anxieties of neighbors of other power plants. Drawing these lines, on the basis of the facts, is the task of the Commission. * * * [I]f investigation shows that the allegations of psychological health effects are unfounded or that the effects are *de minimis*, the Act does not prohibit grant of a license.

[13] The effect of a decision to lift the shutdown orders will be to authorize restart on an interim basis at such time as the utilities complete repairs to the TMI-1 steam generator, and secure the necessary approval of the Commission or its staff for those repairs. The "restart"

SUMMARY OF ARGUMENT

A.1. This case presents a fundamental question of interpretation of the National Environmental Policy Act. In requiring the Nuclear Regulatory Commission to consider stress induced by the proposal to authorize restart of the TMI-1 facility, the court of appeals lost sight of the terms of Section 102(2)(C) of NEPA which establishes the obligation to prepare a "detailed statement" to accompany "every recommendation or report on proposals for * * * major Federal actions significantly affecting the quality of the human environment." Rather than directing a survey of *all effects* of such an action, the statutory requirement is to canvass "*the environmental impact of the proposed action.*" The court of appeals' analysis, discarding this limitation, and extending the NEPA obligation to encompass all effects upon the welfare of mankind that may be plausibly assigned the label "health," imposes a substantial burden upon all federal agencies and does not advance the objectives of the National Environmental Policy Act.

2. Respondent has not alleged that the Commission has failed adequately to consider any species of environmental degradation, such as radiation, that will or may flow from the renewed operation of the TMI-1 plant, and has not claimed that such phenomena are the cause of the stress cited by respondent. The court of appeals has nonetheless held the alleged mental health effects of restart are themselves environmental impacts of Commission action, because they relate to human health. But contrary to the court of appeals' view, nothing in the statute requires consideration under NEPA of all effects on human health of

---

proceeding itself, however, will remain pending, for it is only the immediate effectiveness of the shutdown order that the Commission is considering revoking at this time. In the restart proceeding itself, on December 10, 1982, the Atomic Safety and Licensing Appeal Board upheld the Licensing Board's determination (see page 10, note 6, *supra*) that no full scale environmental impact statement need be prepared. *In re Metropolitan Edison Co. (Three Mile Island Nuclear Power Station Unit 1)*, Docket No. 50-289 (ALAB-705). Time for filing of a request for Commission review of the Appeal Board's decision expires January 3, 1983.

federal action; rather NEPA requires examination only of those health effects (or any other class of effects) that are attributable to environmental causes. And the cases cited by the court of appeals in support of its judgment are inapposite because they embody no broader or different rule.

3. In an effort to escape the restrictive effect of the statutory directive to consider only "environmental impact[s]," respondents note that the statutory language and legislative history express concern with the "*human* environment." But we do not argue that NEPA excludes the effects of federal action on human beings from the mandated analysis; rather, our submission is simply that the consideration mandated by NEPA extends only to those influences on mankind's interests that are environmentally propagated. Indeed, any other rule would render NEPA a noble, but utterly ineffective, call for advancing the human condition in all of its facets.

The legislative history of NEPA confirms that Congress was aware of the importance of man in the environment. But the legislative history equally reflects that precisely because Congress appreciated that man's health and welfare depended upon the continuing vitality of his natural environment, it directed that federal decision makers carefully consider the effects of contemplated federal action upon that natural environment. Solicitude for human health and welfare was thus in a sense a motive for the legislation; but in NEPA Congress addressed only a specific set of problems, deemed theretofore to have been insufficiently recognized, impinging upon that health and welfare: the degradation of the natural environment. The decision of the court of appeals and respondent's argument in support of it confuse the general legislative objective with the specific remedial measures actually adopted.

The decision of the court of appeals is also contrary to the authoritative regulations of the Council on Environmental Quality implementing NEPA. These regulations do not purport to define the statutory term "environmental impact." They do, however, define the related term "human environment" in a manner that makes clear that effects of federal action upon human health and other human concerns are

cognizable under the statute only to the extent that they are rooted in the condition of the natural or physical environment. Thus "human environment" is taken to mean "the natural and physical environment and the *relationship* of people with *that* environment." 40 C.F.R. 1508.14 (emphasis added).

4. Ours is not a novel interpretation of NEPA. On the contrary the decision of the court of appeals is inconsistent with decisions of six other courts of appeals, and another decision of the District of Columbia Circuit—all of the courts of appeals that have considered the question whether non-environmentally caused effects of federal action are subject to the requirements of NEPA. The court below thought to distinguish these decisions by reference to the "holocaust potential of an errant nuclear reactor" and stressing that the alleged stress impinges upon human health. But the court of appeals simply ignored the underlying rationale of the conflicting decisions—i.e., that NEPA requires only the analysis of environmental impacts.

5. The decision of the court of appeals is also at odds with the firmly established principle (see *Kleppe* v. *Sierra Club*, 427 U.S. 390, 410 n.21 (1976)) that an agency satisfies its obligations under NEPA by taking a "hard look" at the environmental consequences of agency action. If fear of environmental consequences that are themselves fully appraised in appropriate environmental analysis must be treated as an independent environmental impact of agency action, however, then contrary to this Court's teaching, *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, 444 U.S. 223, 227 (1980), the agencies are no longer free to determine what action ultimately to take after appraising the pertinent environmental consequences.

B. The decision of the court of appeals is founded upon the erroneous premise that all effects upon human health are environmental impacts for NEPA purposes even if they are not environmentally caused or propagated. Respondents have argued in this Court, however, that the alleged stress effects of restart of TMI-1 are environmentally caused. But close scrutiny of respondent's original stress contention, as well as its belated argument in this Court,

reveals that respondents are engaged in a word game that cannot bring that stress contention within the ambit of NEPA.

Stripped to its essentials, respondent's argument is simply that both routine operation of TMI-1 and the accident at TMI-2 entailed some level of environmental effects, and could, if all safeguards failed, have produced much more substantial environmental effects. Because the TMI-2 accident allegedly generated stress and fear among persons residing in the surrounding region, and because restart of TMI-1 may renew those effects, respondent claims that stress is an environmental effect of TMI-1 operation. But respondent's argument cannot supply the essential ingredient: an environmental cause for the alleged stress. Without such a nexus, that stress cannot be considered an environmental effect. Respondent demonstrates only that environmental effects and the alleged stress have a common source—the very fact of TMI-1 operation. That coincidence is not a causal relationship, such as is required by Section 102(2)(C) of NEPA. Plainly, most, if not all, environmentally-significant federal actions have significant non-environmental effects. To sweep such effects into the already broad ambit of NEPA analysis would impose a substantial burden upon all federal agencies that finds no warrant in the plain language of the statute.[14]

---

[14] As indicated in our petition (Pet. 17 n. 12), if free to do so, we would have presented for review the additional question whether NEPA imposes upon the Nuclear Regulatory Commission a continuing obligation to reassess the environmental impacts of a licensing decision in light of changed circumstances or information even in the absence of any contemplated further federal action. The majority opinion below (Pet. App. 18a-26a) appears to give an affirmative answer that is irreconcilable with this Court's decision in *Weinberger* v. *Catholic Action/Peace Education Project*, 454 U.S. 139, 146 (1981); *Kleppe* v. *Sierra Club*, 427 U.S. 390, 398-406 (1976); *Aberdeen & R. R.R.* v. *SCRAP*, 422 U.S. 289, 320, 322 (1975). We do not tender that issue for review only because the result in this case probably does not turn upon its resolution. As Judge Wilkey observed (see page 16, *supra*), the application of NEPA in this case may rest upon the far narrower ground that the NRC is here engaged in federal action—the restart proceeding. Indeed, whether required to do so or not, the Commission staff actually prepared an environmental impact appraisal here, determining on that

ARGUMENT

NEPA DOES NOT REQUIRE ANALYSIS OF EMOTIONAL STRESS ALLEGEDLY FLOWING FROM FEAR OF THE CONSEQUENCES OF OPERATION OF A NUCLEAR POWER PLANT

A. NEPA Requires Consideration Only Of The Environmental Effects Of Major Environmentally Significant Federal Actions

1. The question presented in this case is one of statutory interpretation, and thus ultimately of discerning congressional intent. As in other contexts, questions of statutory interpretation under the National Environmental Policy Act must begin with the pertinent statutory language. The duty of federal agencies to file environmental impact statements arises from Section 102 of NEPA, 42 U.S.C. 4332, which provides, in pertinent part:

> The Congress authorizes and directs that, to the fullest extent possible: * * * (2) all agencies of the Federal Government shall—
>
> * * * * *
>
> (C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—
>
> (i) the environmental impact of the proposed action * * *.[15]

---

basis that no EIS was required (see page 9, note 6, *supra*). In this setting, the question whether such NEPA compliance was actually required by law lacks the general importance of the issue that we tendered for review. And because of the availability of the narrower ground suggested by Judge Wilkey, the question whether the court of appeals' continuing obligation analysis (which may be dictum) is sound is not presented in sharp focus here. Should the Court disagree with this assessment, however, and conclude that the issue is properly presented, the Court perforce remains free to address it as necessary for the proper disposition of this case. Cf. *Piper Aircraft Co.* v. *Reyno*, 454 U.S. 235, 246 n.12 (1981).

[15] The obligations to prepare environmental assessments, to undertake other forms of preliminary environmental analysis less formal than the full environmental impact statement contemplated by Section 102(2)(C), and to prepare supplemental environmental impact statements have been interpolated into NEPA by the courts, see, e.g.,

As the statutory language plainly reflects, the duty imposed is not to assess all effects of proposals for federal action, or even all effects of the subclass of federal actions that are "major Federal actions significantly affecting the quality of the human environment." Rather, the obligation created is to consider the *environmental* impacts of the latter subclass of federal actions. Thus, the criterion of environmental impact must be satisfied in two respects before a particular effect of a federal action triggers assessment obligations under NEPA. First, there must be a proposal for federal action that has an impact of the requisite significance upon man's environment. But even when such as environmentally-sensitive proposal has been identified, the assessment obligation extends only to those impacts of the federal action that are themselves environmental.[16]

Hanly v. *Kliendienst*, 471 F.2d 823 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973); *Society for Animal Rights, Inc.* v. *Schlesinger*, 512 F.2d 915, 917-918 (D.C. Cir. 1975), and have been confirmed and elucidated in the regulations promulgated by the Council on Environmental Quality, see 40 C.F.R. 1501.3, 1501.4(b) and (c), and 1502.9(c), as a means of enforcing the underlying statutory requirement of preparation of environmental impact statements. In this case the court of appeals has ordered the Commission to determine whether a supplemental environmental impact statement is required, the Commission having prepared an original EIS on TMI-1 licensing in 1974. Because Section 102(2)(C) provides the basis for all forms of environmental analysis required by the courts under NEPA, the question whether a particular class of effects is cognizable is to be resolved by the reference to Section 102(2)(C), irrespective of the stage of environmental analysis involved or the label attached to a particular document.

[16] The onerous implications of neglecting the two-faceted environmental trigger built into the statute is readily apparent. For instance, the Secretary of Transportation's decision to allow the Anglo-French Concorde supersonic transport to land at designated United States airports was regarded as an action subject to NEPA. See *Environmental Defense Fund, Inc.* v. *Department of Transportation*, 6 Envtl. L. Rep. (Envtl. L. Inst.) 20581 (D.C. Cir. 1976). That decision, however, had implications for foreign relations and international commercial relationships, as well as the noise level in communities surrounding the airports in question. See *British Airways Board* v. *Port Authority*, 558 F.2d 75 (2d Cir. 1977). Yet it was never suggested, nor could it be, that the Secretary's NEPA analysis obligations extended to the former as well as the latter.

Although the precise issue presented here has never been addressed by this Court—presumably because a negative answer to the generic question presented has been self-evident—the decisions rendered by the Court in this field reflect the exclusively environmental focus of the assessment duties imposed by NEPA. Thus, for instance, the Court has described NEPA as "one of the recent major federal efforts at reversing the deterioration of the country's environment * * *." *United States* v. *SCRAP*, 412 U.S. 669, 693 (1973). And this Court has explained that "NEPA * * * create[s] a discrete procedural obligation on Government agencies to give written consideration of environmental issues in connection with certain major federal actions," *Aberdeen & R. R.R.* v. *SCRAP*, 422 U.S. 289, 319 (1975); *Flint Ridge Development Co.* v. *Scenic Rivers Association*, 426 U.S. 776, 787 (1976). Typical environmental consequences noted by the Court include "increased solid waste disposal and accelerated depletion of natural resources." *Aberdeen & R. R.R.* v. *SCRAP*, *supra*, 422 U.S. at 327; see also *id.* at 331 (Douglas J., dissenting) ("NEPA * * * is a commitment to the preservation of our natural environment").[17]

The EIS itself, the formal record of NEPA analysis, has been characterized as a "detailed statement of environmental consequences," *Kleppe* v. *Sierra Club*, 427 U.S. 390, 394 (1976), and the Court has explained (*Andrus* v. *Sierra Club*, 442 U.S. 347, 350 (1979)) that:

> The thrust of § 102(2)(C) is * * * that environmental concerns be integrated into the very process of agency decisionmaking. The "detailed statement" it requires is the outward sign that environmental values and consequences have been considered ** *.

---

[17] See also *Named Individual Members of the San Antonio Conservation Society* v. *Texas Highway Department*, 400 U.S. 968, 971 (1970) (Black, J., dissenting from denial of certiorari) (NEPA is a major part of "coordinated legislation designed to protect our Nation's environmental from destruction by water pollution, air pollution, and noise pollution").

See also *Weinberger* v. *Catholic Action/Peace Education Project*, 454 U.S. 139, 143 (1981). Although "NEPA does create * * * a right of action in adversely affected parties to enforce" its requirements (*Aberdeen & R. R.R.* v. *SCRAP*, *supra*, 422 U.S. at 319), the Court has repeatedly emphasized that the role entrusted to the courts is strictly delimited: "once an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to ensure that the agency has considered *the environmental consequences* * * *." *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, 444 U.S. 223, 227 (1980) (emphasis added); see also *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, 435 U.S. 519, 558 (1978); *Kleppe* v. *Sierra Club*, *supra*, 427 U.S. at 410 n.21.

2. As Judge Wilkey and Commisioner Hendrie each recognized (see pages 7–9 & 14–16 *supra;* Pet. App. 36a-38a, 90a-91a), the consideration of stress allegedly induced by the fear of operation of TMI-1 (and, indeed by the very pendency of the restart proposal and the mere possibility of restart (see page 4, *supra*)), is radically inconsistent with the above described limiting principle. Significantly, the gravamen of PANE's allegations is not that the Commission has failed adequately to consider some kind of environmental degradation *in any form*. Nor is it that some impact of TMI-1 operation upon the natural environment—such as radiation—will cause injury to the health (whether mental or physiological) of its members that has not been adequately considered. Compare *Weinberger* v. *Catholic Action*, *supra*, 454 U.S. at 142. Rather, respondent's allegation is that the existence of the plant itself, apart from any environmental impact it might create, will cause emotional injury to TMI-1's neighbors. Yet is is precisely that contention that the court of appeals concluded "allege[s] environmental effects within the meaning of NEPA" (Pet. App. 10a).

The logic of the court of appeals is deceptively simple. Effects of federal action upon human health, the court of appeals reasoned, have been recognized in previous cases as environmental impacts for NEPA purposes (Pet. App. 12a-13a). Finding no warrant for a blanket exclusion of

mental health concerns from the ambit of NEPA, and perceiving in the statute a solicitude for the overall well-being of mankind (*id.* at 13a), the court concluded that "in the context of NEPA, health encompasses psychological health" (*ibid.*). Finally, the court reasoned that because the "governmental decision" involved—the Commission's restart decision—is alleged to affect "human health" in this respect, the stress effect of restart upon the surrounding community is an environmental impact requiring assessment under NEPA (*id.* at 16a).

This syllogism is seriously flawed. Contrary to the court of appeals' first premise there is no general rule that effects of "governmental decisions" upon human health are environmental impacts subject to NEPA analysis. Rather, such effects are cognizable under NEPA only if the twin requirements of the statute are present: a proposal for significant environmentally-sensitive federal action, and an environmental impact. Indeed, as Judge Wilkey noted in his dissent (Pet. App. 36a), the few authorities cited by the court of appeals (*id.* at 13a & n.8) are fully consistent with this reading; they lend no support to the court of appeals' judgment.[18] Thus health effects, like any other class of effects of federal action that may be cognizable under NEPA, are so only to the extent that they are proximately traceable to the impact of the federal action upon the natural or physical environment, or flow from a physically measurable or discernible variable, such as heat, radiation, noise, pollution, or odors, in that environment.

---

[18] Use of toxic herbicides, particularly through aerial spraying, to control unwarranted (or illegal) vegetation potentially affects human health through an environmentally propagated medium. See, e.g., *National Organization for the Reform of Marijuana Laws* v. *United States Department of State*, 452 F.Supp. 1226, 1232 (D. D.C. 1978); *Citizens Against Toxic Sprays, Inc.* v. *Bergland*, 428 F. Supp. 908, 927 (D. Or. 1977). And when the inadequacy of provision for precipitation run-off in the plans for a federal facility is claimed to create a danger of life-threatening flooding, this likewise constitutes an environmental threat to human life and health, properly cognizable under NEPA. See *Maryland-National Capital Park & Planning Commission* v. *United States Postal Service*, 487 F.2d 1029, 1039 (D.C. Cir. 1973).

The range of possible influences upon human health of federal action is potentially unlimited. Bringing all of these within NEPA would radically change that law from one directing special attention to environmental concerns to one dealing generally with human health and welfare. For instance, it has never heretofore been suggested that the Food and Drug Administration must file environmental impact statements pertaining to drug approval and disapproval actions—actions that unquestionably have a powerful impact on human health. Indeed, the pertinent regulations reflect the recognition that drug approval ordinarily is not subject to environmental impact analysis. 21 C.F.R. 25.1(f). The reason is simply that the health effects of such federal actions are not propagated through federal action upon the natural or physical environment. Other examples abound. Proposals for the addition, or termination of governmental health services, welfare programs and other income maintenance schemes surely have as direct a bearing upon human health as the restart of a nuclear power plant. Although we trust that no one would seriously argue that these proposals entail environmental impacts within the meaning of NEPA, the court of appeals' reasoning, treating any and all health effects as environmental impacts, eliminates the principled basis for this limitation.

The range of possible causes of stress is likewise virtually unlimited. Bringing all such causes with NEPA would transform that statute from a mandate for environmental sensitivity in federal administration to an amorphous, and thus ultimately ineffectual, spotlight on human emotions. Assuming that psychological effects are reached by NEPA, only those that are caused by environmental factors are covered.[19] Absent such a causal nexus, the effect of fed-

---

[19] Because the court of appeals' decision completely disregards this fundamental limitation upon the scope of the analysis required by NEPA, we have not pursued here the question whether the particular mental health effects alleged by PANE are outside the scope of NEPA for the independent reason that the chain of causation between the federal action and the alleged effects is so lengthy and attenuated, and the effect so speculative as to render NEPA analysis unnecessary. Clearly, there are situations in which effects of federal action, psychological

eral action simply does not qualify as an "environmental impact" required to be analyzed under NEPA.

Thus, while effects of federal action upon human health may occasion NEPA analysis, the statutory requirement is necessarily limited to environmentally-generated health effects—a fundamental limitation upon agency responsibility under NEPA that was entirely disregarded by the court of appeals. The issue for NEPA purposes, was not, as the court of appeals assumed, whether NEPA requires consideration of environmentally-generated mental health effects of federal actions. Rather, the relevant inquiry is whether stress that allegedly arises from the very fact that TMI-1 exists and that the Commission has authority delegated by Congress to license its renewed operation—a cause entirely distinct from the radiation or accident potential associated with plant operation—is cognizable under NEPA.[20] The plain statutory language requires a negative answer.

3. In order to escape from the plain meaning of Section 102(2)(C)(i) as outlined above, respondents have in this Court seized upon the use of the term "*human* environment" in Section 102(2)(C), arguing that an effect upon the natural or physical environment is not needed to establish

---

or otherwise, are outside the scope of the mandated NEPA analysis for this reason. Cf. *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, *supra*, 435 U.S. at 551.

[20] The court of appeals' misconception of the issue presented permeates the decision. For instance, it was simply irrelevant that the court of appeals found it difficult to believe that "[r]egardless of the severity of psychological health effects * * * [they] would [be] exclude[d] from consideration at any stage of the NEPA procedures relating to any proposed federal action" (Pet. App. 11a). This case does not present that broad questions, but the narrower one whether psychological health effects that are *not* attributable to an environmental cause can be environmental impacts within the meaning of Section 102(2)(C) of NEPA. Equally misplaced was the majority's reliance (*id.* at 13a) upon language of Section 102(2)(A) of NEPA, 42 U.S.C. 4332(2)(A), requiring use of a "systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts." The court of appeals ignored the purpose which this interdisciplinary approach was to serve, stated in the statutory language that immediately follows the quoted phrase—"in planning and decisionmaking which may have an impact on man's environment."

an environmental impact sufficient to trigger NEPA assessment obligations and that the court of appeals accordingly correctly treated the alleged stress effect as such an impact (Br. in Opp. 47-54). Seeking support in the legislative history of NEPA and the Council on Environmental Quality Regulations, respondents now argue that the "human environment" guarded by NEPA is affected by the restart of TMI-1 because restart "would significantly affect the human environment of [the surrounding] area by significantly altering the *psychological context* for local residents" (Br. in Opp. 53; emphasis added). Like the court of appeals' underlying reasoning, respondent's novel interpretation of the term "human environment" is entirely divorced from the pertinent legislative intent; respondent's overall interpretation of NEPA finds no support in the legislative history or the regulations of the Council on Environmental Quality cited. Indeed, the materials are entirely inconsistent with respondent's contention and the court of appeals' decision.

a. Contrary to respondent's suggestion, it is not our submission that effects upon human beings of federal action are for that reason excluded from the scope of analysis under NEPA. Rather, the point of our argument is simply that NEPA covers only those effects of environmentally significant federal action upon man that are propagated through environmental variables. Thus, contrary to respondent's assertion (Br. in Opp. 47-49), our argument in no respect detracts from the central focus of NEPA upon the "human environment" (42 U.S.C. 4332(2)(C)). A major federal action significantly affecting the quality of man's environment is assuredly the statutory trigger for preparation of an environmental impact statement. *Ibid.* But it is equally clear that the statement required need only address the "environmental impact of the proposed action" (42 U.S.C. 4332(2)(C)(i))—and thus that it need not address *nonenvironmental* effects of federal action whether upon human beings or otherwise. In short, our submission would not, as charged, read out of the statute the intended focus upon the *human* environment; it is respondent and the court of appeals that have rewritten the statute by elim-

inating the requirement that the effects of federal action addressed be environmentally caused.

To be sure, if pulled away from its statutory context the term "environmental impacts" could theoretically be read in conjunction with the term "human environment" in Section 102(2)(C) to include impacts upon man's "psychological context" as respondent suggests. For that matter, NEPA could in that manner equally be construed to require consideration of all sorts of federal action affecting a host of other "contexts" impinging upon man's existence—his political, social, moral, economic, and spiritual environments. Such an interpretation, however, would render meaningless the critical statutory terms, "human environment" and "environmental impact," rendering them synonymous, respectively, with "human affairs" and "effects on people." Thus construed, NEPA would require preparation of an "environmental" impact statement on all aspects of every major federal action affecting human beings. But such loose statutory construction based entirely upon creative use of the dictionary and thesaurus does not constitute an appropriate means of discerning Congress' intent. See *United States* v. *Bacto-Unidisk*, 394 U.S. 784, 798–799 (1969); see also *New Hampshire* v. *Atomic Energy Commission*, *supra*, 406 F.2d at 173. As Judge Leventhal, writing for a panel of the D.C. Circuit explained, rejecting the claim that an influx of low-income workers into a more affluent suburban community could constitute an environmental impact within the contemplation of NEPA (*Maryland-National Capital Park & Planning Commission* v. *United States Postal Service*, 487 F.2d 1029, 1037 (1973)):

> Concerned persons might fashion a claim, supported by linguistics and etymology, that there is an impact from people pollution on "environment," if the term be stretched to its maximum. * * * [T]his type of effect cannot fairly be projected as having been within the contemplation of Congress.

b. The legislative history of NEPA clearly demonstrates that Congress intended to require systematic assessment only of the effects of federal action (on human beings or otherwise) that are expressed in or propagated through the

natural or physical environment. Conversely, the legislative history provides no support for the court of appeals' view that all human health effects are within the ambit of NEPA, or for respondents' still more far-reaching suggestion (Br. in Opp. 49 n.43) that all federal action that effects human beings is subject the NEPA.

The legislative history of NEPA underscores that Congress intended to require consideration only of the effects of environmental impacts of federal action—i.e., of those effects traceable to some measurable or physically discernible influence upon, or alteration of, the physical environment. Senator Jackson, the "father" of NEPA, and the Senior Manager on the part of the Senate in the conference committee that produced NEPA, explained this nexus and its relevance to human health in presenting the Conference Report (115 Cong. Rec. 40416 (1969)):

> What is involved is a congressional declaration that we do not intend as a government or as a people to initiate actions which endanger the continued existence or the health of mankind: That we will not intentionally initiate actions which will do irreparable damage to the air, land and water which support life on earth.

See also 115 Cong. Rec. 40924 (1969) (remarks of Senior House manager Rep. Dingell) ("we can now move forward to preserve and enhance our air, aquatic, and terrestrial environments, and * * * provide each citizen of this great country a healthful environment"). The legislative history thus makes it clear that Congress' *motive* for protecting air, land, water and natural resources was, in large measure, to protect the health and welfare of mankind. It is equally clear, however, that the *method* adopted for achieving that end in NEPA was to direct special attention to effects of federal decisions upon the natural and physical environment. The court of appeals has thus effectively substituted one of Congress' broad general ends—advancement of human welfare—for the quite specific means of advancing it actually prescribed by law—the environmental impact statement.

This relationship between environmental protection and human welfare that underlies NEPA is also reflected in

Senator Jackson's definition of the term "human environment": "[The environmental] movement is concerned with the integrity of man's life support system[s]—the human environment" 115 Cong. Rec. 40417 (1969); 115 Cong. Rec. 19009 (1969). Similarly, Senator Jackson described the terms "environment" and "ecology" as part of "a new set of words and concepts [that] have come into wide public use in discussing the Nation's irreplaceable *natural resource base.*" 115 Cong. Rec. 29066 (1969) (emphasis supplied).[21] The Senate Report on the bill that supplied the pertinent language of NEPA also reflects congressional intent to direct attention to the effects of federal actions on the natural environment, and the impact upon man of those effects. S. Rep. No. 91–296, 91st Cong., 1st Sess. 5, 16 (1969) (emphasis supplied):

> The ultimate issue posed by shortsighted, conflicting, and often selfish demands and pressures upon the finite resources of the earth are clear.
>
> * * * * *
>
> The expression 'environmental quality' symbolizes the complex and interrelated aspects of *mans' dependence upon his environment.* * * * The Nation has in many areas overdrawn its bank account in *life-sustaining natural elements.* For these elements—air, water, soil, and living space—technology at present provides no substitutes.

See also H.R. Rep. No. 91–378, 91st Cong., 1st Sess. 3 (1969) (quoting from a *N.Y. Times*, May 3, 1969, editorial).

Both the Senate Report on the legislation (S. Rep. No. 91-296, *supra* at 4) and Senator Jackson's remarks presenting the Conference Report (115 Cong. Rec. 40417 (1969)) contain a revealing listing of perceived environmental quality problems:

---

[21] NEPA's legislative history is replete with similar statements reflecting concern with the natural environment and man's dependence thereupon for survival. See 115 Cong. Rec. 26576 (1969) (remarks of Rep. Rogers); *id.* at 26577 (remarks of Rep. Feighan); *id.* at 26579 (remarks of Rep. Yates); *id.* at 26581 (remarks of Rep. Goodling); *id.* at 26581 (remarks of Rep. Obey); *id.* at 26583 (remarks of Rep. Cohelan); *id.* at 26584 (remarks of Rep. Frey).

> haphazard urban and suburban growth; *crowding, congestion and conditions within our central cities which result in civil unrest and detract from man's social and psychological well-being;* the loss of valuable open spaces; inconsistent and, often, incoherent rural and urban land-use policies; critical air and water pollution problems; diminishing recreational opportunity; continuing soil erosion; the decline and extinction of fish and wildlife species; faltering and poorly designed transportation systems; poor architectual design and ugliness in public and private structures; rising levels of noise; the continued proliferation of pesticides and chemicals without adequate consideration of the consequences; radiation hazards; thermal pollution; an increasingly ugly landscape cluttered with billboards, powerlines, and junkyards * * *.

Significantly each of the effects listed is rooted in a discernible impact upon the natural or physical environment. Respondent's effort (Br. in Opp. 49 n.43) to find support for the judgment of the court of appeals in the italicized language is unavailing. As Judge Wilkey observed (Pet. App. 37a n.17), that language reflects only that the underlying environmental causes of social and psychological malaise should be considered. Senator Jackson did not even suggest that the social and psychological effects of physical crowding were, in their own right, environmental quality problems. A fortiori, there is no suggestion that social or mental ills that are not environmentally grounded are nonetheless environmental impacts for NEPA purposes.[22]

Congress' understanding of the relationship between protection of human health and that of the natural environment is also conveyed by the introductory language of NEPA proclaiming the legislative findings and purpose. As this Court has recognized (*Andrus* v. *Sierra Club*, *supra*, 442 U.S. at 349, quoting 42 U.S.C. 4321):

> NEPA sets forth its purposes in bold strokes:
>
> > The purposes of this Act are: To declare a national policy which will encourage productive and enjoy-

---

[22] Under respondent's view, federal action affecting urban "conditions," such as poverty or drug addition would apparently require formal analysis under NEPA.

> able harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation * * *.

Congress chose its words carefully; "stimulat[ion] of the health and welfare of man" is adopted as a purpose—but only to the extent achievable by "prevent[ion] or elimination[ion of] damage to the environment and biosphere." Similarly, in Section 101(a) of NEPA, 42 U.S.C. 4331(a), Congress "recogniz[ed] the profound impact of man's activity on * * * the natural environment [and] the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man."

Protection of human health and welfare was thus a motive for adoption of a particular procedural mechanism to advance that end, the environmental impact statement. But reference to that general motive provides no basis for shoehorning any measure that might be thought to advance the human condition into NEPA analysis. The decision of the court of appeals thus loses sight entirely of the means selected by Congress to achieve its ends.

c. The court of appeals' conclusion that, because it relates to human health, stress allegedly associated with restart of TMI-1 is an environmental impact for NEPA purposes is also contrary to the regulations promulgated by the Council on Environmental Quality, 40 C.F.R. 1500 *et seq.* Substantial deference is due to these authoritative regulations. *Andrus* v. *Sierra Club*, *supra*, 442 U.S. at 357-358.

The CEQ regulations repeatedly describe the portion of an environmental impact statement that fulfills the requirements of Section 102(2)(C)(i) of NEPA as a statement of the "[e]nvironmental [c]onsequences" of the proposed action. 40 C.F.R. 1502.10(g), 1502.16. Although the CEQ regulations contain no definition of the term "environmental," employed in 42 U.S.C. 4332(2)(C)(i) (requiring "a detailed statement * * * on the environmental impact of the proposed action"), they provide that the related statutory

term "human environment" ("major Federal actions significantly affecting the quality of the human environment") embraces "*the natural and physical environment* and the relationship of people with *that* environment." 40 C.F.R. 1508.14 (emphasis added). The CEQ regulations thus make clear that the "human environment" for NEPA purposes includes human affairs only the extent that they are affected by forces expressed in the "natural and physical environment." Plainly, the term "environmental impact" can have no broader ambit than that assigned the term "human environment."

Respondent, however, seeks support for the decision below in the Council's explanatory comment (43 Fed. Reg. 55988 (1978)) that it was not the Council's intention by its definition of human environment to limit that term to "the natural and physical aspects of the environment." Read in context, however, this comment merely reaffirms that the statutory mandate to consider the effects of federal action extends to people, as well as plants, animals and inanimate objects, as long as the operative cause is environmental. Thus the Council's comment goes on to call attention to the definition of the term "effects"—employed in the regulations as a synonym for the statutory term "impact"—which provides that "effects" "includes ecological * * * aesthetic, historic, cultural, economic, social or health, whether direct, indirect or cumulative." Of course, because 40 C.F.R. 1508.8 merely defines the term impact, without defining the term environmental, the inclusiveness of this definition reflects only that the range of "effects" and "impacts" to be considered is broad; it does not purport to eliminate the separate *statutory* directive that the impacts to be surveyed under NEPA be environmentally-grounded. Thus, it follows from the Council's regulations that the effects upon human health of federal action are cognizable under NEPA if and only if environmentally caused.

The Council also declared that "[t]he full scope of the environment is set out in Section 101 of NEPA." 43 Fed. Reg. 55988 (1978). As we have seen (pages 34–35, *supra*), Section 101, 42 U.S.C. 4331, like other introdutory language in NEPA, reflects the role of man in the environment. But the

role portrayed is one of dependency: mankind's reliance for survival upon the surrounding natural world. Nothing in Section 101 suggests that the "psychological context" identified by respondent—in which man stands isolated from the natural and physical environment—of which fears induced by nuclear power plant operation are said to be a part, is within the scope of the environment that is the subject of the analysis required by NEPA.

Respondent also urges in this Court (Br. in Opp. 51 n.44) that the express relegation of social and economic effects of federal action to a secondary role under the CEQ regulations, indicates that mental health effects such as those at issue here must receive full analysis under NEPA. On the contrary, the pertinent regulation, set out in the margin[23], actually reflects the fundamental principle we have identified. Social and economic effects are explicitly assigned a secondary role, not merely because the CEQ has determined that they are, in any event, too remote from any environmental cause to warrant preparation of an EIS that is not otherwise necessary (see page 28 note 19, *supra*), but primarily in consequence of the fundamental rule applicable to all classes of "impacts": that absent some environmental cause expressed in the natural or physical environment, an "effect" simply cannot properly be classified as environmental for NEPA purposes. Significantly, even when preparation of an environmental impact statement is required by the presence of other, environmental, effects of federal action, the regulation directs coverage of social or economic effects only to the extent that such effects are related to the natural or physical environmental effects. 40 C.F.R.

---

[23] 40 C.F.R. 1508.14 provides:

Human environment.

"Human environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. * * * *This means* that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical *environmental* effects are *interrelated*, then the environmental impact statement will discuss all of these effects on the human environment. [Emphasis added.]

1508.14 thus embodies and implements the requirement of environmental causation that is prescribed by Section 102(2)(C)(i).[24]

4. Ours is not a novel interpretation of NEPA. On the contrary, the decision of the court of appeals here is inconsistent with the decisions of every other court of appeals that has considered the issue, as well as a well-reasoned decision of the District of Columbia Circuit itself. These courts of appeals have uniformly recognized that psychological and socioeconomic effects that are not environmentally grounded are outside the scope of the analysis required by NEPA.

As indicated above (page 31), in *Maryland-National Capital Park & Planning Commission* v. *United States Postal Service*, *supra*, the District of Columbia Circuit rejected the claim that an influx of low income workers into an affluent neighborhood could be regarded as an environmental impact subject to analysis under NEPA. To similar effect is *Breckinridge* v. *Rumsfeld*, 537 F.2d 864, 865-866 (6th Cir. 1976), cert. denied, 429 U.S. 1061 (1977). There the court rejected the claim that unemployment caused by closing of a military base was an environmental impact cognizable under NEPA, explaining that although "NEPA goes beyond * * * the 'physical environment' * * * factors other than the physical environment [are to be considered] * * * only when there exist[s] a primary impact on the physical environment." Accord: *Image of Greater San Antonio, Texas* v. *Brown*, 570 F.2d 517, 522 (5th Cir.

---

[24] Respondent would apparently read Section 1508.14 to require inclusion of all social and economic effects of federal action in an environmental impact statement if any aspect of the action is environmentally significant, even if the social and economic effects are unrelated to the environmental effects. For instance, an environmental impact statement on the construction of a military base would be required to include not only the social and economic consequences of depletion of a scarce water supply, but the purely economic effects of the base on the surrounding region. This interpretation is contradicted, however, by the language of Section 1508.14 reaffirming that social and economic effects need never to be addressed under NEPA unless causally connected to the impact of federal action expressed in the natural or physical environment.

1978); *Como-Falcon Coalition, Inc.* v. *Department of Labor*, 609 F.2d 342, 345-346 (8th Cir. 1979), cert. denied, 446 U.S. 936 (1980);[25] *Goodman Group, Inc.* v. *Dishroom*, 679 F.2d 182, 184-185 (9th Cir. 1982); *Citizens Committee Against Interstate Route 675* v. *Lewis*, 542 F. Supp. 496, 531-537 (S.D. Ohio 1982).[26] And several courts of appeals have specifically rejected the claim that social fears and anxieties arising from federal action must be addressed under NEPA, in the absence of an environmental effect. See, e.g., *Nucleus of Chicago Homeowners Association* v. *Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), cert. denied, 424 U.S. 967 (1976); *First National Bank of Chicago* v. *Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973); see also *Como-Falcon Coalition, Inc.* v. *Department of Labor*, 465 F. Supp. 850, 861-862 (D. Minn. 1978), aff'd 609 F.2d 342, 345-346 (8th Cir. 1979), cert denied. 446 U.S. 936 (1980).[27] See also *Hanly* v. *Kliendeinst*, 471 F.2d 823, 833 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973) (*"Hanley II"*); compare *Hanley* v. *Mitchell*, 460 F.2d 640, 647 (2d Cir.), cert. denied, 409 U.S. 990 (1972) (*"Hanly I"*).[28]

---

[25] Respondent suggests (Br. in Opp. 38) that the decision in this case rests upon a factual finding that the socioeconomic effects in question here were insignificant. On the contrary, although the district court had made such a finding (see 609 F.2d at 345), the court of appeals expressly held that the "district court erred" in considering these issues, and that they were as a matter of law outside NEPA. *Id.* at 345-346.

[26] The rule of these cases is consistent with CEQ regulations. See page 37, *supra*. As explained above those regulations do not require analysis of non-environmentally-grounded socioeconomic effects of federal action. Similarly, none of the cited cases suggest that if preparation of an EIS is required for independent reasons, social and economic effects of federal action must be canvassed unless they are proximately traceable to natural or physical environmental effects of the action.

[27] The court of appeals' reliance (Pet. App. 13a) on *Chelsea Neighborhood Associations* v. *Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975), is misplaced, because the court below overlooked this limitation. In *Chelsea Neighborhood Associations*, the court of appeals merely held that an EIS that had been prepared was inadequate because it failed to address social and psychological effects upon residents of a housing project alleged to arise directly from the unique physical form of the project.

[28] While requiring, in *Hanly I*, that a federal agency take cognizance of a broad range of urban environmental effects, including noise

The court of appeals recognized the force of the above-mentioned decisions, but thought to distinguish them by stressing the special "holocaust potential of an errant nuclear reactor" (Pet. App. 15a), striving to couch its holding in case-specific terms. But there is no logical basis for confining the court's holding to the facts of this case; the cognizability of a class of effects under NEPA cannot turn upon their alleged severity (or mildness) in a particular case. And the court of appeals' cryptic explanation (*id.* at 16a) that "in contrast [to the foregoing cases] PANE is not asking the agency to evaluate the effect of 'people pollution' on the environment, but rather the effect of a governmental decision of human health" simply ignores the rationale of the conflicting decisions, i.e. that NEPA requires only the analysis of environmental impacts. Nothing in the court of appeals' decision explains why the principle recognized by the other courts that have addressed this issue is not controlling here.

5. Thus far our argument has been that the decision of the court of appeals requires consideration of matters that are outside the scope of the environmental analyses commissioned by Congress. Because this additional obligation is a "creature of judicial cloth, not legislative cloth" (*Weinberger* v. *Catholic Action*, *supra*, 454 U.S. at 141), and because NEPA provides no sanction for such judicial law making (*Vermont Yankee Nuclear Power Corp.* v. *NRDC*, *supra*, 435 U.S. at 548), it cannot stand. But it should not

---

associated with construction of a federal detention center in close proximity to a residential setting, the Second Circuit made it equally clear, in *Hanly II*, that the required consideration does not extend to effects comparable to those alleged here (471 F.2d at 833):

> For the most part [plaintiffs'] opposition is based upon a psychological distate for having a jail located so close to residential apartments * * *. It is doubtful whether psychological and sociological effects upon neighbors constitute the type of factors that may be considered [under NEPA].

The reason articulated by the court of appeals for this exclusion, it is true, was the difficulty of measurement of these effects (*ibid.*). As noted above (page 28 note 19), we have not pursued that argument here. Nevertheless, the distinction between purely psychological effects and environmental variables recognized by the two decisions of the Second Circuit cited, is for the reasons we have stated, a valid one.

escape notice that the decision of the court of appeals imposing a non-statutory obligation is not a mere barnacle upon the statute. Rather it directly undercuts the legislative commands embodied in NEPA, frustrating the statutory scheme.

It is well established that NEPA imposes upon the concerned federal agency ultimate responsibility for determining what action to take after taking a "hard look" at the environmental consequences of contemplated action. *Strycker's Bay Neighborhood Council, Inc.* v. *Karlen*, *supra*, 444 U.S. at 227; *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, *supra*, 435 U.S. at 558; *Kleppe* v. *Sierra Club*, *supra*, 427 U.S. at 410 n.21. In taking that "hard look" we appreciate that the agency may be required to consider eventualities that are not certain to arise; remote and spectulative possibilities, however, need not be addressed. Cf. *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, *supra*, 435 U.S. at 551. But to treat individuals' fears respecting the environmental consequences of agency action (and stress occasioned by those fears) as environmental effects of the federal action in their own right, as the court of appeals has done here, threatens the "hard look" principle. Under the court of appeals' analysis, an agency's failure to treat these fears as an independent consideration militating against approval of a proposed federal action would be ground for invalidation of agency action even though the agency had fully appraised the facts underlying the fears in question. In short, under the court of appeals' analysis, it is not enough to take a hard look at the environmental consequences of agency action and to consider the views of interested parties; an agency must also ascertain if public disagreement with the agency's decision will engender stress in the affected population. Nothing in NEPA requires this result; indeed, such an analysis can only detract from the intended focus of NEPA analysis, the effects of federal action upon the natural and physical environment.

The burdens imposed upon federal agencies by the court of appeals' decision are substantial. To be sure, the decision of the court of appeals nominally went no further than to

hold NEPA applicable to "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrope." But as we have explained, there is no principled basis for this limitation. The court of appeals' decision has clear implications for activities licensed or conducted by the Commission and other federal agencies. If agencies must take account of stress that is not proximately traceable to an environmental effect of agency action under NEPA, forms of stress other than "post-traumatic stress" may also be cognizable, as may stress which is not accompanied by physical symptoms or which is caused by factors other than "fears or recurring catastrophe."

Psychological stress contentions are not unique to TMI-1. Indeed, virtually every federal activity arguably generates psychological impacts; such effects simply are not confined, as the court of appeals suggested, to nuclear energy. Examples include management of air traffic control, operation of National Airport, management of federal prisons, economic programs with their effects on life and livelihood, leasing of federal lands for coal mining, construction of dams, and construction and operation of miliary facilities. The amorphous nature of psychological effects, moreover, renders their assessment in all of these circumstances especially burdensome and subjective. In discarding the requirement of an environmental nexus that limits NEPA obligations, the court of appeals has effected an extraordinary expansion of the task of assessment established by that statute, potentially encompassing all of the non-environmental effects of federal actions that affect the environment, as well as the health-related effects of actions that do not affect the environment at all.

B. Stress Caused By Fear Of Operation Of TMI-1 Is Not Environmentally Caused

1. As we have explained, the court of appeals' decision was founded on the erroneous premise that because some effects of federal action on human health are caused by environmental factors, and may thus be subject to NEPA analysis, all effects of federal action affecting human health are themselves environmental effects (pages 26–29, *supra*).

We have also explained that the stress that is the subject of respondent's contentions is not recognizable as an environmental effect (page 26, *supra*). In this Court, however, respondents have argued (Br. in Opp. 41-46) that even if, as we contend, NEPA requires consideration of human health effects only to the extent that they are caused by an impact upon the natural environment or a discernible or measurable physical phenomen, the alleged stress satisfies that test.[29] Close examination of respondent's actual stress contention, along with the arguments made in this Court, merely confirms that respondent cannot bring these contentions within the scope of the analysis required by NEPA.

As noted above, the mental health effect that respondent would have the Commission consider is not the product of heat, radiation, liquid or gaseous effluents, noise, odors, smoke, or visual impacts associated with operation of the TMI-1 plant. Instead, the alleged effects are caused by stress and fear induced by the simple fact that the plant is, or may in the future be, in operation. The most that can be said is that respondent's members fear the environmental effects, such as low level radiation, associated with routine plant operation, and the possibility of other graver effects should a serious nuclear accident occur. These environmental effects are not in dispute here. But, as we have explained, fear of an environmental effect such as these is not in itself an environmental effect.

---

[29] In opposition to our petition respondent argued that this case entailed no more than a factual dispute as to whether that was so (Br. in Opp. 45-46). As indicated in our reply brief, that suggestion is disingenuous. The issue in this case has been at all times a purely legal one, and respondent did not argue in the court of appeals that a factual determination was necessary to determine whether the evidence it wished to proffer for consideration was material to an issue properly before the Commission. The court of appeals likewise treated the issue as purely legal in character. Significantly, its judgment was unconditional in character; it did not leave the Commission any discretion to decline, upon proper findings, to entertain petitioner's stress claim. The issues left open for the Commission instead were whether the evidence to be proffered was sufficiently significant to require supplementation of the EIS.

Indeed, the issue framed by the Commission at the outset of the proceedings that led to this case was whether psychological distress associated with restart that was "*unrelated* directly to exposure to radiation" was within the ambit of NEPA (J.A. 20). Respondent's contention was submitted together with its affirmative argument on the legal issue thus framed, without any suggestion that the contention should be considered irrespective of the Commission's ruling. Respondent thus defined its stress contention as one that would be outside the scope of NEPA should its legal contentions be rejected. Moreover, respondent did not argue in the court of appeals that the Commission was in any event required to take evidence on its contention. Respondent's alternative position in this Court is therefore inconsistent with its prior stance in this litigation.[20]

2. In any event, there is no merit to respondent's argument that the fear-generated stress they would have the Commission consider is environmentally grounded. Indeed, respondent's effort (Br. in Opp. 32-33, 42-45) to demonstrate the necessary causal nexus simply underscores the absence of the required connection. Respondent argues that NEPA mandates assessment of the mental health effects of restart because:

> 1) the TMI-2 accident caused releases of radiation—an environmental effect;
>
> 2) the TMI-2 accident threatened to cause other, more serious, environmental effects;
>
> 3) apprehension caused by the TMI-2 accident engendered mental health effects;
>
> 4) restart of TMI-1 creates potential for future radiation releases or even a serious nuclear accident entailing environmental effects; and
>
> 5) restart of TMI-1 may exacerbate the stresses caused by the TMI-2 accident.

---

[20] Significantly, respondent's belated argument that the alleged stress flows from an impact upon the natural or physical environment is strikingly similar to its contention, rejected by the court of appeals (Pet. App. 64a; see page 17, *supra*), that such stress is a "special hazard of radioactivity."

The foregoing premises, however, are insufficient to establish that any stress that may be occasioned by the restart decision is traceable to the environmental effects, potential or certain, that would be attributable to restart. Respondent simply demonstrates that potential environmental effects and mental health effects flow from a common source. But, as we have explained above, that circumstance is not enough to render the alleged mental health effects "environmental impacts[s]" of the federal action.[31]

Respondent's other efforts to portray stress alleged to result from fear of operation of TMI-1 as an environmental impact are equally unpersuasive. Noting that the Commission recognizes that it must consider the environmental consequences of plant operation, including those that might flow from a major accident, and labeling the possibility of a major accident "holocaust potential," respondent reasons (Br. in Opp. 45):

> That holocaust potential * * * is precisely the sort of impact on the natural or physical environment that the Commission argues must be the proximate cause of any psychological health damage to be considered under NEPA.

Respondents thus identify "holocaust potential" as the environmental cause of the mental health problems they tender for analysis under NEPA. *Quod erat demonstrandum*. But this is no more than a play upon words.

Of course, NEPA may require the consideration of events—such as a major nuclear accident—that are quite unlikely to occur but that would entail substantial environ-

---

[31] For similar reasons, the Licensing Board, which accepted the contention that NEPA requires consideration only of the environmental effects of federal action (J.A. 35), went astray in suggesting that "the psychological stress alleged by the intervenors here is related to a significant environmental impact" (*ibid.*; see page 5 note 4, *supra*). In support of that conclusion the Board observed only that the operation of TMI-1 and the accident at TMI-2 entailed environmental effects, noting that the former had led the Commission to undertake preparation of an EIS when TMI-1 was initially licensed.

mental effects if they occurred.[32] Such a major accident may perhaps be labeled a potential "holocaust". But it does not follow that the mental health effects of the *possibility* ("holocaust potential") of a major nuclear accident entailing environmental effects are themselves environmentally caused.[33] In short, no causal nexus at all exists between the alleged stress and the effects of restart upon "man's life support system—the human environment" (115 Cong. Rec. 40417 (1969) (remarks of Sen. Jackson)). Respondent's analysis, like the court of appeals' judgment it purports to

---

[32] Thus, respondents err in characterizing (Br. in Opp. 43 n.37) our argument as holding that "psychological health damage related to the restart of Unit 1 cannot be considered because there is no realistic probability of an accident." The question whether a major nuclear accident is so unlikely as to place the environmental effects of such an accident entirely outside the scope of NEPA analysis is not presented here. Neither does our argument depend in any way upon characterization of respondents' members' fears as irrational (compare page 6, *supra*).

[33] That respondents' argument rests on semantic legerdemain is clear from its pervasive relevance upon such verbal formulations to avoid our argument. See, e.g., Br. in Opp. 12 (The alleged "psychological health damage * * * is directly related to the *potential* of a nuclear reactor to cause overwhelming damage to the human environment"), *id.* at 38 (The alleged mental health effects "involve[ ] a *concern related to the prospect* of further devastating impact on the physical environment"), *id.* at 43 ("The restart of TMI-1 poses the *risk* of a further accident and further, perhaps exposure to radiation—a direct physical impact of the sort required by the Commission's legal theory"), *id.* at 53 ("Restart of [TMI-1] would significantly affect the human environment * * * by significantly altering the *psychological context* for local residents") (emphasis added).

Most revealing in this respect is respondent's ingenuous explanation (Br. in Opp. 53 n.45) that:

> The fact that this health damage derives from an alteration of the human environment is most clearly illustrated by the fact that if people were to move away—to a different human environment—they would not suffer from the same damage to their health upon restart of TMI-1.

Similar statements—all literally correct—could be made about any federal action that affects people in any manner. Nor does the relatively localized impact of TMI-1 operation render its mental health effects environmental. It has never been thought that NEPA is applicable only to localized phenomena.

support, thus plainly requires consideration under NEPA of non-environmental effects of federal action.[34]

3. The quintessentially non-environmental nature of the stress impacts alleged by PANE is reflected strikingly by considering the nature of measures, if any, that might be attempted to mitigate these effects. Given the fundamental role that mitigation plays in the NEPA process, see 40 C.F.R. 1502.14(f), 1502.16(h), 1503.3(d), 1505.2(c), 1505.3, 1508.20, it is noteworthy that, as Commissioner Hendrie observed (Pet. App. 82a, 89a; see page 8, *supra*), consideration of stress effects admits of no meaningful mitigation.

To be sure, the licensing board suggested (J.A. 39, 44-45; see page 6, *supra*) that mitigation of some kind is possible. Significantly, however, the actual measures identified—provision of an opportunity for airing of fears and installation of additional monitoring devices (assuming they would be effective)—are themselves directed to respondents' consciousness, rather than the environmental effects of operation of TMI-1. In any event, the true gravamen of respondent's claim is better revealed by the

---

[34] Similarly, amicus curiae American Psychological Association misses the mark with its suggestion (Br. in Opp. 14) that the mental health effects of a restart decision are cognizable under NEPA because "restarting the TMI-1 reactor will have an effect upon the physical * * * environment, through the dramatic alteration of conditions of temperature and pressure within the reactor and other physical effects of reactor operation." Even if these effects, wholly contained within a closed system, could somehow be deemed environmental impacts within the meaning of 42 U.S.C. 4332(2)(C)(i), they do not supply the predicate for analysis of mental health effects of restart. To repeat, our submission is not that reactor restart has no environmental effects, but that the alleged mental health effects of a restart decision do not flow from the distinctively environmental attributes of plant operation. Respondent plainly has not alleged that conditions of high temperature and pressure within the reactor itself directly engender mental illness or distress among its members. Rather, these conditions are merely symptomatic of normal reactor operation, and it is the fact of such operation itself, rather than any of its environmental effects that creates the potential for an accident which in turn gives rise to the alleged mental health effects. Thus the cause of the mental health effects alleged by respondent is fear or risk itself, not any environmental effect (whether certain to occur or speculative) of restart.

mitigation measures implicit in respondent's stress contention itself, and in its arguments in this Court. Respondent's original contention is simply that because of unmitigable stress factors "it [is] impossible for the NRC to operate TMI-1 without endangering public health and safety" (Pet. App. 115a). See also Br. in Opp. 53 n.45 (quoted at page 46 note 33, *supra*). Respondent's frankly stated view that mitigation of the alleged stress requires permanent closing of the TMI-1 plant, rather than any set of measures to improve safety or control environmental effects, is eloquent testimony that the alleged stress is in no sense an environmental effect of operation of TMI-1.

* * * * *

In closing, we pause to emphasize that although neither NEPA nor the Atomic Energy Act requires consideration by the Commission of respondents' allegations of community fears in deciding whether to authorize restart,[35] it is our view that these laws do serve effectively to alleviate those fears by assuring that any factual basis therefor is publicly aired and fully explored in the most effective manner. As recognized by Chairman Ahearne (Pet. App. 80a-81a) and most aptly described by Commissioner Hendrie (Pet. App. 83a, 87a):

> [T]he most appropriate way for the Commission to take account of fears related to TMI-1 is, first, to assure that the technical decision on restart is sound; and second, if the decision is to permit restart, to make sure that the public understands, through accurate and comprehensible information, fully disseminated, the basis for the Commission's determination that the plant can operate safely.
>
> * * * * *
>
> [A]n unsafe plant is not made safe by the fact that local citizens are unconcerned about it, any more than a safe plant is made unsafe by the fact that local residents are deeply anxious about it.

---

[35] Respondents have not sought this Court's review of the court of appeals' judgment on the Atomic Energy Act issue.

Here, prior to authorizing restart, the Commission has undertaken a detailed evaluation of the safety of TMI-1 and has required that safety measures be taken prior to any restart. See page 3, *supra*. In this manner, the subject of community fears—the safety of the operation at TMI—has been addressed by the Commission.

In addition, in order to educate both itself and the public, the Commission has gone to great lengths to involve the public in its decisionmaking process (see, e.g., page 18, *supra*). The Atomic Energy Act, 42 U.S.C. 2239(a), provides that upon the request of interested persons the Commission must hold a public hearing as part of its proceedings on most significant determinations. Similarly, public involvement is a mainstay of the NEPA planning process. See 40 C.F.R. 1506.6. The legislative history of each of these enactments reflects a strong congressional desire to promote public confidence in federal decisionmaking by providing for significant public participation. See S. Rep. No. 1677, 87th Cong., 2d Sess. 7-9 (1962) (Atomic Energy Act); S. Rep. No. 91-296, *supra*, at 5 (NEPA). This important aspect of the latter statute moreover, has been emphasized by this Court most recently in *Weinberger* v. *Catholic Action of Hawaii*, *supra*, 454 U.S. at 143. The District of Columbia Circuit has made the same point about the former statute: "In the Atomic Energy Act, [Congress] * * *, in the interest of public confidence in the thoroughness of the review process, invited public scrutiny * * *." *Union of Concerned Scientists* v. *Atomic Energy Commission*, 499 F.2d 1069, 1078 (D.C. Cir. 1974) (citation omitted).

In the decision under review, the court of appeals has overlooked authoritative teachings on the role of public participation under the statutes that govern nuclear licensing, as well as the clear meaning of Section 102(2)(C) of NEPA. To be sure, there are those who fear the development and utilization of nuclear power. "But Congress has made a choice to at least try nuclear energy, establishing a reasonable review process in which courts are to play only a limited role * * *. Time may prove wrong the decision to develop nuclear energy, but it is Congress or the States within their appropriate agencies which must eventually make

that judgment." *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, *supra*, 435 U.S. at 557–558. NEPA does not provide the courts a means of second-guessing Congress' considered judgment in the guise of mandating consideration of alleged psychological harm induced by individuals' disagreement with the implementation of congressional enactments by a federal agency. Once an agency has considered the "environmental consequences" of its proposed federal action, it has satisfied its NEPA responsibilities.

CONCLUSION

For the foregoing reasons, the judgment of the court of appeals respecting the Commission's responsibilities under NEPA should be reversed.

REX E. LEE
Solicitor General

CAROL E. DINKINS
Assistant Attorney General

LOUIS F. CLAIBORNE
Deputy Solicitor General

JOSHUA I. SCHWARTZ
Assistant to the Solicitor General

JAMES M. SPEARS
JACQUES B. GELIN
RICHARD J. LAZARUS
Attorneys

LEONARD BICKWIT, JR.
General Counsel

MARTIN G. MALSCH
Deputy General Counsel

PETER G. CRANE
Acting Assistant General Counsel
Nuclear Regulatory Commission

DECEMBER 1982

APPENDIX

Sections 2, 101 and 102 of the National Environmental Policy Act of 1969, 42 U.S.C. 4321, 4331 and 4332 provide as follows:

Section 2, 42 U.S.C. 4321:

> The purposes of this chapter are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

Section 101, 42 U.S.C. 4331:

> (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.
>
> (b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans,

functions, programs, and resources to the end that the Nation may—

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Section 102, 42 U.S.C. 4332:

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which

will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) the responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement of such impacts, prepares a written assessment of such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by subchapter II of this chapter.

NO. 81-2399-CFX Vide: 82-358	TITLE Metropolitan Edison Company, et al., Petitioners, v. People Against Nuclear Energy, et al.

DOCKETED	COURT
July 1, 1982	United States Court of Appeals for the District of Columbia Circuit

DATE	PROCEEDINGS AND ORDERS
	Counsel for petitioners: James B. Hamlin
	Counsel for respondents: Solicitor General
July 1, 1982	Petition for writ of certiorari filed. (Record filed).
July 12, 1982	Order extending time for respondent, People Against Nuclear Energy, to file a response to the petition until Sept. 20, 1982.
Aug. 27, 1982	Order further extending time to file a response to the petition until Sept. 30, 1982.
Sept. 27, 1982	Motion of Atomic Industrial Forum for leave to file a brief as amicus curiae filed. (Vide: 82-358).
Sept. 30, 1982	Motion of The American Mining Congress for leave to file a brief as Amicus Curiae in support of petition filed. (Vide: 82-358).
Sept. 30, 1982	Brief, amicus curiae, of The National Association of Manufacturers in support of petitioners filed, (Vide: 82-358
Sept. 30, 1982	Brief, amicus curiae, of Edison Electric Institute in support of petitioners filed. (Vide: 82-358).
Sept. 30, 1982	Motion of The Chamber of Commerce of the United States for leave to file a brief as amicus curiae in support of petitioners filed. (Vide: 82-358).
Sept. 30,1982	Brief for the respondents in opposition filed. (Vide: 82-358
Oct. 1, 1982	Brief, amicus curiae, of National Rural Electric Corporation filed. (Vide: 82-358).
Oct. 1, 1982	Brief, amicus curiae, of Scientists and Engineers for Secure Energy, Inc. in support of petitioners filed. (Vide: 82-358).
Oct. 7, 1982	Reply brief for the petitioners filed. (D).
Oct. 6, 1982	DISTRIBUTED. 10-29.
Nov. 1, 1982	The motion of Atomic Industrial Forum for leave to file a brief as amicus curiae is GRANTED. The motion of American Mining Congress for leave to file a brief as amicus curiae is GRANTED. The motion of the Chamber of Commerce of the United States for leave to file a brief as amicus curiae is GRANTED. Petition GRANTED, and the case is consolidated with 82-358 and a total of one hour is allotted for oral argument.

Dec. 1, 1982	Joint appendix filed. (Vide: 82-358)
Dec. 16, 1982	Brief of petitioners', Metropolitan Edison Co., et al. filed (VIDE: 82-358)

(OVER)

81-2399

Title

No.

DATE	PROCEEDINGS AND ORDERS
Dec. 16, 1982	Brief, amicus curiae, of the Atomic Industrial Forum filed. (VIDE: 82-358)
Dec. 16, 1982	Brief, amicus curiae, of the National Association of Manufacturers filed. (VIDE: 82-358)
Dec. 16, 1982	Brief, amicus curiae, of Edison Electric Institute filed. (Vide: 82-358).
Dec. 16, 1982	Brief, amicus curiae, of Scientists and Engineers for Secure Energy, Inc. filed. (Vide: 82-358).
Dec. 23, 1982	Brief for the U. S. and The U. S. Nuclear Regulatory Commission filed. (82-358).
Jan. 11, 1983	Order extending time to file the respondents' brief on the merits until Jan. 29, 1983.
Jan. 21, 1983	CIRCULATED.
Jan. 29, 1983	Brief for respondent People Against Nuclear Energy filed. (D) (Vide: 82-358)
Jan. 29, 1983	Brief, amicus curiae, American Psychological Association in support of respondents filed. (Vide: 82-358). (D).
Jan. 29, 1983	Brief, amicus curiae, for the Union of Concerned Scientists in support of respondents filed. (Vide: 82-358) (D).
Jan. 28, 1983	Brief, amicus curiae, for American Sociological Association in support of respondents filed. (Vide: 82-358) (D).
Feb. 22, 1983	Reply brief for the petitioners filed. (D). (Vide: 82-358) (Metropolitan Edison Company, et al).
Feb. 22, 1983	Reply brief for the U. S. and the U. S. Nuclear Regulatory Commission filed. (D). (Vide: 82-358).
March 1, 1983	ARGUED.